



SEQUENCE LISTING

<110> Nagaike, Kazuhiro
Mori, Yasuko
Gomi, Yasuyuki
Takahashi, Michiaki
Kouichi, Yamanishi

<120> Recombinant Varicella-Zoster Virus

<130> 59150-8037

<140> US 10/591,787

<141> 2007-07-30

<150> PCT/JP2005/003652

<151> 2005-03-05

<150> JP 2004-063277

<151> 2004-03-05

<160> 91

<170> PatentIn version 3.2

<210> 1

<211> 35

<212> DNA

<213> Artificial

<220>

<223> primer

<400> 1

tataactagt gcggccgctt acgaaaacgt gcatg

35

<210> 2

<211> 34

<212> DNA

<213> Artificial

<220>

<223> primer

<400> 2

cgcgacctgg tttattttac aaactccttt gtgg

34

<210> 3

<211> 34

<212> DNA

<213> Artificial

<220>

<223> primer

<400> 3

gcgcaccagg tctctgttta gaccttaaaa ttg

34

<210> 4
 <211> 34
 <212> DNA
 <213> Artificial

<220>
 <223> primer

<400> 4
 tatagcggcc gcttttaatc tggttgtgga aatg

34

<210> 5
 <211> 4226
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (229)..(4158)

<220>
 <221> misc_feature
 <222> (99)..(99)
 <223> The 'Xaa' at location 99 stands for Thr, or Met.

<220>
 <221> misc_feature
 <222> (512)..(512)
 <223> The 'Xaa' at location 512 stands for Ala, or Val.

<220>
 <221> misc_feature
 <222> (1275)..(1275)
 <223> The 'Xaa' at location 1275 stands for Ser, Leu, or Xaa.

<400> 5
 atactatggt ccatgaactt cccgcctcga gtctcgtcca atcactacat cgtcttatca 60
 ttaagaatat ttacacggtg acgacacggg gaggaatat gcggtcgagg ggggggcaca 120
 acacgtttta agtactgttg gaactccctc accaaccgca aycgcaatcc tttgaaggct 180
 gcgagagcgt ttggaaaact cgggtacgtc taaattcacc ccagygcg atg gat acg 237
 Met Asp Thr
 1

ccg ccg atg cag cgc tct aca ccc caa cgc gcg ggg tcg cct gat act 285
 Pro Pro Met Gln Arg Ser Thr Pro Gln Arg Ala Gly Ser Pro Asp Thr
 5 10 15

ttg gag tta atg gac ctg ttg gac gcg gcc gcc gcg gcc gcc gaa cac 333
 Leu Glu Leu Met Asp Leu Leu Asp Ala Ala Ala Ala Ala Glu His
 20 25 30 35

agg gcc cgg gtg gtc acc tcg agt cag cct gac gat cta cta ttt gga 381
 Arg Ala Arg Val Val Thr Ser Ser Gln Pro Asp Asp Leu Leu Phe Gly
 40 45 50

gag aac ggg gtc atg gtg gga cgg gaa cat gag atc gtt tca att ccc Glu Asn Gly Val Met Val Gly Arg Glu His Glu Ile Val Ser Ile Pro 55 60 65	429
tcc gta tcg gga ctt caa cca gaa ccc aga acg gaa gat gtt ggc gaa Ser Val Ser Gly Leu Gln Pro Glu Pro Arg Thr Glu Asp Val Gly Glu 70 75 80	477
gag cta aca caa gac gac tac gta tgc gag gac ggt cag gat cta ayg Glu Leu Thr Gln Asp Asp Tyr Val Cys Glu Asp Gly Gln Asp Leu Xaa 85 90 95	525
ggc tcg cct gta atc ccg ctg gcc gag gtc ttc cac acc cga ttc tcg Gly Ser Pro Val Ile Pro Leu Ala Glu Val Phe His Thr Arg Phe Ser 100 105 110 115	573
gag gcc ggc gcg cga gaa cca aca gga gcc gat cgc tcc ctc gag aca Glu Ala Gly Ala Arg Glu Pro Thr Gly Ala Asp Arg Ser Leu Glu Thr 120 125 130	621
gtc tct ctc gga acg aag ctt gct agg tct cca aaa cca ccg atg aac Val Ser Leu Gly Thr Lys Leu Ala Arg Ser Pro Lys Pro Pro Met Asn 135 140 145	669
gat ggg gaa acg ggc aga ggt acg acc cct ccg ttc ccg cag gcc ttc Asp Gly Glu Thr Gly Arg Gly Thr Thr Pro Pro Phe Pro Gln Ala Phe 150 155 160	717
tcc cct gta tcc ccc gcg tct cct gtt gga gac gcc gcc ggg aac gat Ser Pro Val Ser Pro Ala Ser Pro Val Gly Asp Ala Ala Gly Asn Asp 165 170 175	765
caa ¹ cgg gaa gac cag cgg tct ata ccc cga caa acg acg aga gga aat Gln Arg Glu Asp Gln Arg Ser Ile Pro Arg Gln Thr Thr Arg Gly Asn 180 185 190 195	813
tca cca ggt ttg ccg tcg gtg gtc cat cga gac aga caa act cag tcc Ser Pro Gly Leu Pro Ser Val Val His Arg Asp Arg Gln Thr Gln Ser 200 205 210	861
atc tcg ggt aaa aag ccg ggc gat gag caa gcg ggt cat gcg cat gca Ile Ser Gly Lys Lys Pro Gly Asp Glu Gln Ala Gly His Ala His Ala 215 220 225	909
tcg ggg gac gga gta gtt ctc cag aaa act caa ccg ccc gct cag gga Ser Gly Asp Gly Val Val Leu Gln Lys Thr Gln Arg Pro Ala Gln Gly 230 235 240	957
aag agc ccg aag aaa aag act ttg aag gtt aag gtc cca ctc ccg gcg Lys Ser Pro Lys Lys Lys Thr Leu Lys Val Lys Val Pro Leu Pro Ala 245 250 255	1005
cgg aaa ccc ggt gga cct gta ccc ggc ccg gtt gag caa ttg tac cac Arg Lys Pro Gly Gly Pro Val Pro Gly Pro Val Glu Gln Leu Tyr His 260 265 270 275	1053
gtc ctt tcg gac agc gtt ccc gct aag ggg gca aag gcg gac ctg ccg Val Leu Ser Asp Ser Val Pro Ala Lys Gly Ala Lys Ala Asp Leu Pro 280 285 290	1101

ttt gag acc gat gat acc cgc cca agg aaa cat gat gcc cgg ggt ata Phe Glu Thr Asp Asp Thr Arg Pro Arg Lys His Asp Ala Arg Gly Ile 295 300 305	1149
aca cct cgc gtc cct gga cgt tgc tgc ggg ggc aaa cct aga gcg ttt Thr Pro Arg Val Pro Gly Arg Ser Ser Gly Gly Lys Pro Arg Ala Phe 310 315 320	1197
ttg gcc ctg ccg gga aga tcc cac gca cca gac ccg att gag gat gac Leu Ala Leu Pro Gly Arg Ser His Ala Pro Asp Pro Ile Glu Asp Asp 325 330 335	1245
agc ccg gtg gag aaa aag cca aag agt cgt gag ttt gtt tgc tct tca Ser Pro Val Glu Lys Lys Pro Lys Ser Arg Glu Phe Val Ser Ser Ser 340 345 350 355	1293
tcc tct tcc tgc tgc tgg gga tgc tca tgc gag gat gaa gac gat gaa Ser Ser Ser Ser Ser Trp Gly Ser Ser Ser Glu Asp Glu Asp Asp Glu 360 365 370	1341
ccc cgg cgc gtt tgc gtg gga agt gaa act aca ggc agc agg tcc gga Pro Arg Arg Val Ser Val Gly Ser Glu Thr Thr Gly Ser Arg Ser Gly 375 380 385	1389
cgc gaa cac gcc cct tcc ccg tca aat tgc gat gat tgc gac tca aat Arg Glu His Ala Pro Ser Pro Ser Asn Ser Asp Asp Ser Asp Ser Asn 390 395 400	1437
gat ggt ggg tgc acg aaa caa aat atc caa ccg gga tat cga tcc atc Asp Gly Gly Ser Thr Lys Gln Asn Ile Gln Pro Gly Tyr Arg Ser Ile 405 410 415	1485
age ggt ccc gat ccg agg att cgt aag acc aaa cgt ctt gcg ggg gaa Ser Gly Pro Asp Pro Arg Ile Arg Lys Thr Lys Arg Leu Ala Gly Glu 420 425 430 435	1533
ccg ggg cgc cag aga cag aaa tca ttt tcc ctg ccg cga tcc aga acc Pro Gly Arg Gln Arg Gln Lys Ser Phe Ser Leu Pro Arg Ser Arg Thr 440 445 450	1581
ccg ata att ccc ccg gtg tgc ggg ccg ctc atg atg ccc gac gga agc Pro Ile Ile Pro Pro Val Ser Gly Pro Leu Met Met Pro Asp Gly Ser 455 460 465	1629
cct tgg ccc gga tgc gcg ccc ctc cca tcc aac agg gtg cgg ttt gga Pro Trp Pro Gly Ser Ala Pro Leu Pro Ser Asn Arg Val Arg Phe Gly 470 475 480	1677
ccg tcc ggg gag acc aga gag ggt cac tgg gag gat gag gct gtg aga Pro Ser Gly Glu Thr Arg Glu Gly His Trp Glu Asp Glu Ala Val Arg 485 490 495	1725
gcg gcg cgg gct cgt tac gag gcc tca act gaa ccc gyg ccg ctt tac Ala Ala Arg Ala Arg Tyr Glu Ala Ser Thr Glu Pro Xaa Pro Leu Tyr 500 505 510 515	1773
gtg ccg gag ttg gga gat ccg gct aga cag tac cgc gcg ctg att aac Val Pro Glu Leu Gly Asp Pro Ala Arg Gln Tyr Arg Ala Leu Ile Asn 520 525 530	1821

ctg atc tac tgt cca gac aga gac cct ata gca tgg ctc cag aac ccc Leu Ile Tyr Cys Pro Asp Arg Asp Pro Ile Ala Trp Leu Gln Asn Pro 535 540 545	1869
aag ctg acc ggt gtc aac tcg gcc ctg aac cag ttc tac caa aag ctg Lys Leu Thr Gly Val Asn Ser Ala Leu Asn Gln Phe Tyr Gln Lys Leu 550 555 560	1917
ttg cca ccg gga cgg gcg ggt acc gcc gtt acg ggg agc gta gcg tct Leu Pro Pro Gly Arg Ala Gly Thr Ala Val Thr Gly Ser Val Ala Ser 565 570 575	1965
ccc gtt ccg cat gta ggc gaa gcc atg gcc acg ggg gag gcc ctc tgg Pro Val Pro His Val Gly Glu Ala Met Ala Thr Gly Glu Ala Leu Trp 580 585 590 595	2013
gct ctc ccc cac gcg gcc gcg gcc gtg gct atg agc cgt cgg tac gac Ala Leu Pro His Ala Ala Ala Ala Val Ala Met Ser Arg Arg Tyr Asp 600 605 610	2061
cgg gcc caa aaa cac ttt atc cta cag agt ctc cgc aga gcc ttt gcc Arg Ala Gln Lys His Phe Ile Leu Gln Ser Leu Arg Arg Ala Phe Ala 615 620 625	2109
ggc atg gca tac ccc gag gca acg ggc tcc agt ccg gcg gcg cgg atc Gly Met Ala Tyr Pro Glu Ala Thr Gly Ser Ser Pro Ala Ala Arg Ile 630 635 640	2157
tcc cgc ggt cac cct tct cca aca acc ccg gcc aca cag act ccc gac Ser Arg Gly His Pro Ser Pro Thr Thr Pro Ala Thr Gln Thr Pro Asp 645 650 655	2205
ccg cag ccg tcg gcc gcc gcg cgc tct ctt tct gtg tgt cca ccg gat Pro Gln Pro Ser Ala Ala Ala Arg Ser Leu Ser Val Cys Pro Pro Asp 660 665 670 675	2253
gat cgt tta cga act ccg cgc aag cgc aag tcc cag cca gtc gag agc Asp Arg Leu Arg Thr Pro Arg Lys Arg Lys Ser Gln Pro Val Glu Ser 680 685 690	2301
aga agc ctc ctc gac aag att agg gag aca ccc gtc gcg gac gcc cgg Arg Ser Leu Leu Asp Lys Ile Arg Glu Thr Pro Val Ala Asp Ala Arg 695 700 705	2349
gtt gca gac gat cat gtg gtt tcc aag gcc aag agg cgg gta tcc gag Val Ala Asp Asp His Val Val Ser Lys Ala Lys Arg Arg Val Ser Glu 710 715 720	2397
ccc gtg acc atc acc tcg ggc cct gtg gtg gat ccc ccc gcc gta ata Pro Val Thr Ile Thr Ser Gly Pro Val Val Asp Pro Pro Ala Val Ile 725 730 735	2445
acg atg cca ctt gac gga ccg gcc cca aac ggg gga ttt cgg cgt att Thr Met Pro Leu Asp Gly Pro Ala Pro Asn Gly Gly Phe Arg Arg Ile 740 745 750 755	2493
ccc cgg ggg gcc ctg cat acc ccg gtc ccg tcg gac cag gct cgc aag Pro Arg Gly Ala Leu His Thr Pro Val Pro Ser Asp Gln Ala Arg Lys 760 765 770	2541

gcg tac tgt acc ccc gaa acc atc gcc cgt ctg gtc gac gac cca ttg Ala Tyr Cys Thr Pro Glu Thr Ile Ala Arg Leu Val Asp Asp Pro Leu 775 780 785	2589
ttt ccc acg gcc tgg cgc cct gcg cta agc ttt gat ccc ggc gcc ttg Phe Pro Thr Ala Trp Arg Pro Ala Leu Ser Phe Asp Pro Gly Ala Leu 790 795 800	2637
gcg gaa atc gcc gct cgg cgt ccg ggc gga gga gac cga cgg ttt ggt Ala Glu Ile Ala Ala Arg Arg Pro Gly Gly Gly Asp Arg Arg Phe Gly 805 810 815	2685
cca ccc agc gga gtg gag gcg ctg cga cgg agg tgc gcc tgg atg cgg Pro Pro Ser Gly Val Glu Ala Leu Arg Arg Arg Cys Ala Trp Met Arg 820 825 830 835	2733
cag atc cca gac ccg gag gat gtg agg ctt ctg atc atc tac gat ccg Gln Ile Pro Asp Pro Glu Asp Val Arg Leu Leu Ile Ile Tyr Asp Pro 840 845 850	2781
ttg ccc gga gag gac atc aac ggc ccc ctc gag agc acc ctc gcg aca Leu Pro Gly Glu Asp Ile Asn Gly Pro Leu Glu Ser Thr Leu Ala Thr 855 860 865	2829
gat ccg gga ccg tca tgg agt cca tcc cga ggg gga ctg tct gtg gtc Asp Pro Gly Pro Ser Trp Ser Pro Ser Arg Gly Gly Leu Ser Val Val 870 875 880	2877
ctg gca gcc ctg agt aac cgg ttg tgc ctg ccg agc act cat gcc tgg Leu Ala Ala Leu Ser Asn Arg Leu Cys Leu Pro Ser Thr His Ala Trp 885 890 895	2925
gcc ggg aac tgg acc ggc ccg ccg gac gtg tcc gct ttg aac gcc cgg Ala Gly Asn Trp Thr Gly Pro Pro Asp Val Ser Ala Leu Asn Ala Arg 900 905 910 915	2973
ggc gtt tta tta ctg tcg acc cga gac ctg gcc ttt gcc ggg gcc gtc Gly Val Leu Leu Leu Ser Thr Arg Asp Leu Ala Phe Ala Gly Ala Val 920 925 930	3021
gag tat cta ggc tcg cgg ttg gcc tct gcc cgg cgc cgg ttg ctg gtg Glu Tyr Leu Gly Ser Arg Leu Ala Ser Ala Arg Arg Arg Leu Leu Val 935 940 945	3069
ttg gac gcg gtg gcc ctc gag agg tgg ccc ggg gat gga ccc gct ttg Leu Asp Ala Val Ala Leu Glu Arg Trp Pro Gly Asp Gly Pro Ala Leu 950 955 960	3117
tct cag tat cac gtg tac gtc cgg gcc ccg gcg cga ccg gac gcc cag Ser Gln Tyr His Val Tyr Val Arg Ala Pro Ala Arg Pro Asp Ala Gln 965 970 975	3165
gcc gtc gtc cga tgg cca gac tcg gcg gtc aca gaa gga ctc gcc cgg Ala Val Val Arg Trp Pro Asp Ser Ala Val Thr Glu Gly Leu Ala Arg 980 985 990 995	3213
gcc gtg ttt gca tcg tcg cgc acc ttt ggg cca gcg agt ttt gct Ala Val Phe Ala Ser Ser Arg Thr Phe Gly Pro Ala Ser Phe Ala 1000 1005 1010	3258

cgt atc gag act gcg ttt gcc aac ctg tac ccg ggc gaa caa ccc	3303
Arg Ile Glu Thr Ala Phe Ala Asn Leu Tyr Pro Gly Glu Gln Pro	
1015 1020 1025	
ctg tgt ttg tgc cgc ggt ggg aac gtc gca tac acc gtg tgt acc	3348
Leu Cys Leu Cys Arg Gly Gly Asn Val Ala Tyr Thr Val Cys Thr	
1030 1035 1040	
cgc gcg ggc ccc aag acc cgc gtc ccc ctg tcg ccc cgt gaa tac	3393
Arg Ala Gly Pro Lys Thr Arg Val Pro Leu Ser Pro Arg Glu Tyr	
1045 1050 1055	
cgg cag tac gtg ctg ccg ggt ttt gac ggt tgc aag gac ctc gcg	3438
Arg Gln Tyr Val Leu Pro Gly Phe Asp Gly Cys Lys Asp Leu Ala	
1060 1065 1070	
cga cag tct cgg ggt ctg ggg ctc ggg gca gcc gac ttt gtg gac	3483
Arg Gln Ser Arg Gly Leu Gly Leu Gly Ala Ala Asp Phe Val Asp	
1075 1080 1085	
gag gcg gca cat agc cac cgc gca gca aac cga tgg ggc ctg ggt	3528
Glu Ala Ala His Ser His Arg Ala Ala Asn Arg Trp Gly Leu Gly	
1090 1095 1100	
gcc gcg ctt cga ccc gtc ttc ctt ccc gag gga cgg aga ccg ggg	3573
Ala Ala Leu Arg Pro Val Phe Leu Pro Glu Gly Arg Arg Pro Gly	
1105 1110 1115	
gcc gcc ggg ccg gag gcc ggc gac gta ccc acc tgg gcg agg gtg	3618
Ala Ala Gly Pro Glu Ala Gly Asp Val Pro Thr Trp Ala Arg Val	
1120 1125 1130	
ttt tgc cgc cac gcc ctg ctg gaa ccc gac cct gcc gcg gaa cca	3663
Phe Cys Arg His Ala Leu Leu Glu Pro Asp Pro Ala Ala Glu Pro	
1135 1140 1145	
ctc gtg ctt cca ccc gtg gcc ggt cgg tcg gtg gcg ctg tat gcg	3708
Leu Val Leu Pro Pro Val Ala Gly Arg Ser Val Ala Leu Tyr Ala	
1150 1155 1160	
tcg gcg gac gag gct cgg aat gcc ctc ccc ccg att ccc aga gta	3753
Ser Ala Asp Glu Ala Arg Asn Ala Leu Pro Pro Ile Pro Arg Val	
1165 1170 1175	
atg tgg ccg ccc ggt ttt ggg gcc gcg gag acg gtg ttg gag ggg	3798
Met Trp Pro Pro Gly Phe Gly Ala Ala Glu Thr Val Leu Glu Gly	
1180 1185 1190	
agc gac gga aca cgg ttc gcg ttc gga cac cac ggg ggc tcg gaa	3843
Ser Asp Gly Thr Arg Phe Ala Phe Gly His His Gly Gly Ser Glu	
1195 1200 1205	
cgg ccg gca gaa acc cag gcg ggg cga cag cgg cgc acc gca gac	3888
Arg Pro Ala Glu Thr Gln Ala Gly Arg Gln Arg Arg Thr Ala Asp	
1210 1215 1220	
gac aga gaa cac gct ttg gag ccg gac gat tgg gag gtg ggg tgt	3933
Asp Arg Glu His Ala Leu Glu Pro Asp Asp Trp Glu Val Gly Cys	
1225 1230 1235	

gaa gac gcg tgg gac agc gag gag ggg ggc ggg gac gac ggg gac	3978
Glu Asp Ala Trp Asp Ser Glu Glu Gly Gly Gly Asp Asp Gly Asp	
1240 1245 1250	
gca ccg ggg tca tcc ttt ggg gtg agc gtc gtg tcg gtg gcc ccg	4023
Ala Pro Gly Ser Ser Phe Gly Val Ser Val Val Ser Val Ala Pro	
1255 1260 1265	
ggg gtg ctg cga gac cgc cgg gtg ggc tyg cgc ccg gcg gtc aag	4068
Gly Val Leu Arg Asp Arg Arg Val Gly Xaa Arg Pro Ala Val Lys	
1270 1275 1280	
gtg gag ctg ttg tcc tcg tcc tcg tcc tcc gag gac gag gac gat	4113
Val Glu Leu Leu Ser Ser Ser Ser Ser Ser Glu Asp Glu Asp Asp	
1285 1290 1295	
gtg tgg gga ggg cgc ggg ggg agg agc ccc ccg cag agt cgg ggg	4158
Val Trp Gly Gly Arg Gly Gly Arg Ser Pro Pro Gln Ser Arg Gly	
1300 1305 1310	
tgacggagtc ccctcctttt ctggtgagcg ccacyggcgc gcggactgtt tgttgtttgt	4218
taataaaa	4226

<210> 6
 <211> 1310
 <212> PRT
 <213> Varicella zoster

<220>
 <221> misc_feature
 <222> (99)..(99)
 <223> The 'Xaa' at location 99 stands for Thr, or Met.

<220>
 <221> misc_feature
 <222> (512)..(512)
 <223> The 'Xaa' at location 512 stands for Ala, or Val.

<220>
 <221> misc_feature
 <222> (1275)..(1275)
 <223> The 'Xaa' at location 1275 stands for Ser, Leu, or Xaa.

<400> 6

Met Asp Thr Pro Pro Met Gln Arg Ser Thr Pro Gln Arg Ala Gly Ser
1 5 10 15

Pro Asp Thr Leu Glu Leu Met Asp Leu Leu Asp Ala Ala Ala Ala Ala
20 25 30

Ala Glu His Arg Ala Arg Val Val Thr Ser Ser Gln Pro Asp Asp Leu
35 40 45

Leu Phe Gly Glu Asn Gly Val Met Val Gly Arg Glu His Glu Ile Val

50

55

60

Ser Ile Pro Ser Val Ser Gly Leu Gln Pro Glu Pro Arg Thr Glu Asp
65 70 75 80

Val Gly Glu Glu Leu Thr Gln Asp Asp Tyr Val Cys Glu Asp Gly Gln
85 90 95

Asp Leu Xaa Gly Ser Pro Val Ile Pro Leu Ala Glu Val Phe His Thr
100 105 110

Arg Phe Ser Glu Ala Gly Ala Arg Glu Pro Thr Gly Ala Asp Arg Ser
115 120 125

Leu Glu Thr Val Ser Leu Gly Thr Lys Leu Ala Arg Ser Pro Lys Pro
130 135 140

Pro Met Asn Asp Gly Glu Thr Gly Arg Gly Thr Thr Pro Pro Phe Pro
145 150 155 160

Gln Ala Phe Ser Pro Val Ser Pro Ala Ser Pro Val Gly Asp Ala Ala
165 170 175

Gly Asn Asp Gln Arg Glu Asp Gln Arg Ser Ile Pro Arg Gln Thr Thr
180 185 190

Arg Gly Asn Ser Pro Gly Leu Pro Ser Val Val His Arg Asp Arg Gln
195 200 205

Thr Gln Ser Ile Ser Gly Lys Lys Pro Gly Asp Glu Gln Ala Gly His
210 215 220

Ala His Ala Ser Gly Asp Gly Val Val Leu Gln Lys Thr Gln Arg Pro
225 230 235 240

Ala Gln Gly Lys Ser Pro Lys Lys Lys Thr Leu Lys Val Lys Val Pro
245 250 255

Leu Pro Ala Arg Lys Pro Gly Gly Pro Val Pro Gly Pro Val Glu Gln
260 265 270

Leu Tyr His Val Leu Ser Asp Ser Val Pro Ala Lys Gly Ala Lys Ala
275 280 285

Asp Leu Pro Phe Glu Thr Asp Asp Thr Arg Pro Arg Lys His Asp Ala

290

295

300

Arg Gly Ile Thr Pro Arg Val Pro Gly Arg Ser Ser Gly Gly Lys Pro
 305 310 315 320

Arg Ala Phe Leu Ala Leu Pro Gly Arg Ser His Ala Pro Asp Pro Ile
 325 330 335

Glu Asp Asp Ser Pro Val Glu Lys Lys Pro Lys Ser Arg Glu Phe Val
 340 345 350

Ser Ser Ser Ser Ser Ser Ser Ser Trp Gly Ser Ser Ser Glu Asp Glu
 355 360 365

Asp Asp Glu Pro Arg Arg Val Ser Val Gly Ser Glu Thr Thr Gly Ser
 370 375 380

Arg Ser Gly Arg Glu His Ala Pro Ser Pro Ser Asn Ser Asp Asp Ser
 385 390 395 400

Asp Ser Asn Asp Gly Gly Ser Thr Lys Gln Asn Ile Gln Pro Gly Tyr
 405 410 415

Arg Ser Ile Ser Gly Pro Asp Pro Arg Ile Arg Lys Thr Lys Arg Leu
 420 425 430

Ala Gly Glu Pro Gly Arg Gln Arg Gln Lys Ser Phe Ser Leu Pro Arg
 435 440 445

Ser Arg Thr Pro Ile Ile Pro Pro Val Ser Gly Pro Leu Met Met Pro
 450 455 460

Asp Gly Ser Pro Trp Pro Gly Ser Ala Pro Leu Pro Ser Asn Arg Val
 465 470 475 480

Arg Phe Gly Pro Ser Gly Glu Thr Arg Glu Gly His Trp Glu Asp Glu
 485 490 495

Ala Val Arg Ala Ala Arg Ala Arg Tyr Glu Ala Ser Thr Glu Pro Xaa
 500 505 510

Pro Leu Tyr Val Pro Glu Leu Gly Asp Pro Ala Arg Gln Tyr Arg Ala
 515 520 525

Leu Ile Asn Leu Ile Tyr Cys Pro Asp Arg Asp Pro Ile Ala Trp Leu

530

535

540

Gln Asn Pro Lys Leu Thr Gly Val Asn Ser Ala Leu Asn Gln Phe Tyr
 545 550 555 560

Gln Lys Leu Leu Pro Pro Gly Arg Ala Gly Thr Ala Val Thr Gly Ser
 565 570 575

Val Ala Ser Pro Val Pro His Val Gly Glu Ala Met Ala Thr Gly Glu
 580 585 590

Ala Leu Trp Ala Leu Pro His Ala Ala Ala Val Ala Met Ser Arg
 595 600 605

Arg Tyr Asp Arg Ala Gln Lys His Phe Ile Leu Gln Ser Leu Arg Arg
 610 615 620

Ala Phe Ala Gly Met Ala Tyr Pro Glu Ala Thr Gly Ser Ser Pro Ala
 625 630 635 640

Ala Arg Ile Ser Arg Gly His Pro Ser Pro Thr Thr Pro Ala Thr Gln
 645 650 655

Thr Pro Asp Pro Gln Pro Ser Ala Ala Ala Arg Ser Leu Ser Val Cys
 660 665 670

Pro Pro Asp Asp Arg Leu Arg Thr Pro Arg Lys Arg Lys Ser Gln Pro
 675 680 685

Val Glu Ser Arg Ser Leu Leu Asp Lys Ile Arg Glu Thr Pro Val Ala
 690 695 700

Asp Ala Arg Val Ala Asp Asp His Val Val Ser Lys Ala Lys Arg Arg
 705 710 715 720

Val Ser Glu Pro Val Thr Ile Thr Ser Gly Pro Val Val Asp Pro Pro
 725 730 735

Ala Val Ile Thr Met Pro Leu Asp Gly Pro Ala Pro Asn Gly Gly Phe
 740 745 750

Arg Arg Ile Pro Arg Gly Ala Leu His Thr Pro Val Pro Ser Asp Gln
 755 760 765

Ala Arg Lys Ala Tyr Cys Thr Pro Glu Thr Ile Ala Arg Leu Val Asp

770

775

780

Asp Pro Leu Phe Pro Thr Ala Trp Arg Pro Ala Leu Ser Phe Asp Pro
 785 790 795 800

Gly Ala Leu Ala Glu Ile Ala Ala Arg Arg Pro Gly Gly Gly Asp Arg
 805 810 815

Arg Phe Gly Pro Pro Ser Gly Val Glu Ala Leu Arg Arg Arg Cys Ala
 820 825 830

Trp Met Arg Gln Ile Pro Asp Pro Glu Asp Val Arg Leu Leu Ile Ile
 835 840 845

Tyr Asp Pro Leu Pro Gly Glu Asp Ile Asn Gly Pro Leu Glu Ser Thr
 850 855 860

Leu Ala Thr Asp Pro Gly Pro Ser Trp Ser Pro Ser Arg Gly Gly Leu
 865 870 875 880

Ser Val Val Leu Ala Ala Leu Ser Asn Arg Leu Cys Leu Pro Ser Thr
 885 890 895

His Ala Trp Ala Gly Asn Trp Thr Gly Pro Pro Asp Val Ser Ala Leu
 900 905 910

Asn Ala Arg Gly Val Leu Leu Leu Ser Thr Arg Asp Leu Ala Phe Ala
 915 920 925

Gly Ala Val Glu Tyr Leu Gly Ser Arg Leu Ala Ser Ala Arg Arg Arg
 930 935 940

Leu Leu Val Leu Asp Ala Val Ala Leu Glu Arg Trp Pro Gly Asp Gly
 945 950 955 960

Pro Ala Leu Ser Gln Tyr His Val Tyr Val Arg Ala Pro Ala Arg Pro
 965 970 975

Asp Ala Gln Ala Val Val Arg Trp Pro Asp Ser Ala Val Thr Glu Gly
 980 985 990

Leu Ala Arg Ala Val Phe Ala Ser Ser Arg Thr Phe Gly Pro Ala Ser
 995 1000 1005

Phe Ala Arg Ile Glu Thr Ala Phe Ala Asn Leu Tyr Pro Gly Glu

1010		1015		1020
Gln Pro Leu Cys Leu Cys Arg Gly Gly Asn Val Ala Tyr Thr Val				
1025		1030		1035
Cys Thr Arg Ala Gly Pro Lys Thr Arg Val Pro Leu Ser Pro Arg				
1040		1045		1050
Glu Tyr Arg Gln Tyr Val Leu Pro Gly Phe Asp Gly Cys Lys Asp				
1055		1060		1065
Leu Ala Arg Gln Ser Arg Gly Leu Gly Leu Gly Ala Ala Asp Phe				
1070		1075		1080
Val Asp Glu Ala Ala His Ser His Arg Ala Ala Asn Arg Trp Gly				
1085		1090		1095
Leu Gly Ala Ala Leu Arg Pro Val Phe Leu Pro Glu Gly Arg Arg				
1100		1105		1110
Pro Gly Ala Ala Gly Pro Glu Ala Gly Asp Val Pro Thr Trp Ala				
1115		1120		1125
Arg Val Phe Cys Arg His Ala Leu Leu Glu Pro Asp Pro Ala Ala				
1130		1135		1140
Glu Pro Leu Val Leu Pro Pro Val Ala Gly Arg Ser Val Ala Leu				
1145		1150		1155
Tyr Ala Ser Ala Asp Glu Ala Arg Asn Ala Leu Pro Pro Ile Pro				
1160		1165		1170
Arg Val Met Trp Pro Pro Gly Phe Gly Ala Ala Glu Thr Val Leu				
1175		1180		1185
Glu Gly Ser Asp Gly Thr Arg Phe Ala Phe Gly His His Gly Gly				
1190		1195		1200
Ser Glu Arg Pro Ala Glu Thr Gln Ala Gly Arg Gln Arg Arg Thr				
1205		1210		1215
Ala Asp Asp Arg Glu His Ala Leu Glu Pro Asp Asp Trp Glu Val				
1220		1225		1230
Gly Cys Glu Asp Ala Trp Asp Ser Glu Glu Gly Gly Gly Asp Asp				

1235		1240		1245
Gly Asp Ala Pro Gly Ser Ser Phe Gly Val Ser Val Val Ser Val				
1250		1255		1260
Ala Pro Gly Val Leu Arg Asp Arg Arg Val Gly Xaa Arg Pro Ala				
1265		1270		1275
Val Lys Val Glu Leu Leu Ser Ser Ser Ser Ser Ser Glu Asp Glu				
1280		1285		1290
Asp Asp Val Trp Gly Gly Arg Gly Gly Arg Ser Pro Pro Gln Ser				
1295		1300		1305
Arg Gly				
1310				

<210> 7
 <211> 8878
 <212> DNA
 <213> Artificial

<220>
 <223> plasmid

<400> 7

ttaattaagg ccgcagcttc ctagataact tcgtatagca tacattatac gaagttatgg	60
atctcccgcc cagcgtcttg tcattggcga actcgaacac gcagatgcag tcggggcggc	120
gcggtcccag gtccacttcg catattaagg tgacacgcgc ggcctcgaac acagctgcag	180
gccatgagcg aaaaatacat cgtcacctgg gacatgttgc agatccatgc acgtaaactc	240
gcaagccgac tgatgccttc tgaacaatgg aaaggcatta ttgccgtaag ccgtggcggt	300
ctggtaccgg gtgcgttact ggcgcgtgaa ctgggtattc gtcatgtcga taccgtttgt	360
atttccagct acgatcacga caaccagcgc gagcttaaag tgctgaaacg cgcagaaggc	420
gatggcgaag gcttcacgtt tattgatgac ctggtggata ccggtggtac tgcggttgcg	480
attcgtgaaa tgtatccaaa agcgcacttt gtcaccatct tcgcaaaacc ggctggtcgt	540
ccgctggttg atgactatgt tgttgatatc ccgcaagata cctggattga acagccgtgg	600
gatatgggcg tcgtattcgt cccgccaatc tccggtcgct aaccggtagc ggatcatcta	660
gacccgggta ccgttaactt gtttattgca gcttataatg gttacaaata aagcaatagc	720
atcacaaatt tcacaaataa agcatttttt tcaactgcatt ctagtgtggt tttgtccaaa	780
ctcatcaatg tatcttatca tgtctggatc cccattctca tgtttgacag cttatcatcg	840

aatttctgcc attcatccgc ttattatcac ttattcaggc gtagcaacca ggcgtttaag	900
ggcaccaata actgccttaa aaaaattacg ccccgccctg ccactcatcg cagtactgtt	960
gtaattcatt aagcattctg ccgacatgga agccatcaca gacggcatga tgaacctgaa	1020
tcgccagcgg catcagcacc ttgtcgcctt gcgtataata tttgcccattg gtgaaaacgg	1080
gggcgaagaa gttgtccata ttggccacgt ttaaatacaa actggtgaaa ctcacccagg	1140
gattggctga gacgaaaaac atattctcaa taaacccttt agggaaatag gccaggtttt	1200
caccgtaaca cgccacatct tgcgaatata tgtgtagaaa ctgccggaaa tcgtcgtggt	1260
attcactcca gagcgatgaa aacgtttcag tttgctcatg gaaaacgggtg taacaagggt	1320
gaacactatc ccataatcacc agctcaccgt ctttcattgc catacgggaat tccggatgag	1380
cattcatcag gcgggcaaga atgtgaataa aggccggata aaacttgtgc ttatttttct	1440
ttacgggtctt taaaaaggcc gtaatatcca gctgaacgggt ctggttatag gtacattgag	1500
caactgactg aaatgcctca aaatgttctt tacgatgcca ttgggatata tcaacgggtg	1560
tatatccagt gatttttttc tccatttttag cttccttagc tcctgaaaat ctcgataact	1620
caaaaaatac gcccggtagt gatcttattt cattatgggtg aaagttggaa cctcttacgt	1680
gccgatcaac gtctcattht cgccaaaagt tggcccagggt cttcccggta tcaacaggga	1740
caccaggatt tattttattct gcgaagtgat cttccgtcac aggtatttat tcgcgataag	1800
ctcatggagc ggcgtaaccg tcgcacagga aggacagaga aagcgcggtat ctgggaagtg	1860
acggacagaa cggtcaggac ctggattggg gaggcgggtg ccgccgctgc tgctgacgggt	1920
gtgacgttct ctgttccgggt cacaccacat acgttccgcc attcctatgc gatgcacatg	1980
ctgtatgccg gtataccgct gaaagtcttg caaagcctga tgggacataa gtccatcagt	2040
tcaacggaag tctacacgaa ggtttttgcg ctggatgtgg ctgcccggca ccgggtgcag	2100
tttgcgatgc cggagtctga tgcggttgcg atgctgaaac aattatcctg agaataaatg	2160
ccttggcctt tatatggaaa tgtggaactg agtggatatg ctgtttttgt ctgttaaaca	2220
gagaagctgg ctgttatcca ctgagaagcg aacgaaacag tcgggaaaat ctcccattat	2280
cgtagagatc cgcattatta atctcaggag cctgtgtagc gtttatagga agtagtggtc	2340
tgtcatgatg cctgcaagcg gtaacgaaaa cgatttgaat atgccttcag gaacaataga	2400
aatcttcgtg cgggtgttacg ttgaagtgga gcggattatg tcagcaatgg acagaacaac	2460
ctaatgaaca cagaacctatg atgtgggtctg tcctttttaca gccagtaggc tcgccgcagt	2520
cgagcgacgg cgaagccctc gagtgagcga ggaagcacca gggaacagca cttatatatt	2580
ctgcttacac acgatgcctg aaaaaacttc ccttgggggtt atccacttat ccacggggat	2640

atTTTTataa	tTatTTTTtt	tatagTTTTt	agatcttctt	ttttagagcg	ccttgtaggc	2700
ctttatccat	gctggttcta	gagaagggtgt	tgtgacaaat	tgccctttca	gtgtgacaaa	2760
tcaccctcaa	atgacagtcc	tgtctgtgac	aaattgccct	taaccctgtg	acaaattgcc	2820
ctcagaagaa	gctgtTTTTt	cacaaagtta	tccttgctta	ttgactcttt	tttatttagt	2880
gtgacaatct	aaaaacttgt	cacacttcac	atggatctgt	catggcggaa	acagcggtta	2940
tcaatcacia	gaaacgtaaa	aatagcccg	gaatcgcca	gtcaaacgac	ctcactgagg	3000
cggcatatag	tctctcccg	gatcaaaaac	gtatgctgta	tctgttcggt	gaccagatca	3060
gaaaatctga	tggcacccta	caggaacatg	acggtatctg	cgagatccat	gttgctaaat	3120
atgctgaaat	attcggattg	acctctgcgg	aagccagtaa	ggatatacgg	caggcattga	3180
agagtttcgc	ggggaaggaa	gtggTTTTtt	atcgccctga	agaggatgcc	ggcgatgaaa	3240
aaggctatga	atcttttctt	tggtttatca	aacgtgcgca	cagtccatcc	agagggcttt	3300
acagtgtaca	tatcaacca	tatctcattc	ccttctttat	cgggttacag	aaccggttta	3360
cgcagtttcg	gcttagtgaa	acaaaagaaa	tcaccaatcc	gtatgccatg	cgtttatacg	3420
aatccctgtg	tcagtatcgt	aagccggatg	gctcaggcat	cgtctctctg	aaaatcgact	3480
ggatcataga	gcgttaccag	ctgcctcaaa	gttaccagcg	tatgcctgac	ttccgccgcc	3540
gcttcctgca	ggtctgtgtt	aatgagatca	acagcagaac	tccaatgcgc	ctctcataca	3600
ttgagaaaaa	gaaaggccgc	cagacgactc	atatcgtatt	ttccttccgc	gatatcactt	3660
ccatgacgac	aggatagtct	gagggttatc	tgtcacagat	ttgagggtgg	ttcgtcacat	3720
ttgttctgac	ctactgaggg	taatttgtca	cagttttgct	gtttccttca	gcctgcatgg	3780
atTTTctcat	actTTTTgaa	ctgtaatttt	taaggaagcc	aaatttgagg	gcagtttgtc	3840
acagttgatt	tccttctctt	tccttctgtc	atgtgacctg	atatcggggg	ttagttcgtc	3900
atcattgatg	agggttgatt	atcacagttt	attactctga	attggctatc	cgcgtgtgta	3960
cctctacctg	gagtttttcc	cacgggtggat	atttcttctt	gcgctgagcg	taagagctat	4020
ctgacagaac	agttcttctt	tgtttcctcg	ccagttcgtc	cgctatgctc	ggttacacgg	4080
ctgcggcgag	cgctagtgat	aataagtgac	tgaggatatgt	gctcttctta	tctccttttg	4140
tagtgttgct	cttattttta	acaactttgc	ggttttttga	tgactttgcg	atTTTgttgt	4200
tgctttgcag	taaattgcaa	gattttaata	aaaaacgcaa	agcaatgatt	aaaggatggt	4260
cagaatgaaa	ctcatggaaa	cacttaacca	gtgcataaac	gctggtcatg	aaatgacgaa	4320
ggctatcgcc	attgcacagt	ttaatgatga	cagcccgga	gcgaggaaaa	taacccggcg	4380
ctggagaata	ggtgaagcag	cggatttagt	tggggtttct	tctcaggcta	tcagagatgc	4440

cgagaaagca	gggcgactac	cgcacccgga	tatggaaatt	cgaggacggg	ttgagcaacg	4500
tgttggttat	acaattgaac	aaattaatca	tatgcgtgat	gtgttttggt	cgcgattgcg	4560
acgtgctgaa	gacgtatttc	caccggtgat	cggggttgct	gcccataaag	gtggcgttta	4620
caaaacctca	gtttctgttc	atcttgctca	ggatctggct	ctgaaggggc	tacgtgtttt	4680
gctcgtggaa	ggtaacgacc	cccagggAAC	agcctcaatg	tatcacggat	gggtaccaga	4740
tcttcataatt	catgcagaag	acactctcct	gcctttctat	cttggggaaa	aggacgatgt	4800
cacttatgca	ataaagccca	cttgctggcc	ggggcttgac	attattcctt	cctgtctggc	4860
tctgcaccgt	attgaaactg	agttaatggg	caaatttgat	gaaggtaaAC	tgcccaccga	4920
tccacacctg	atgctccgac	tggccattga	aactgttgct	catgactatg	atgtcatagt	4980
tattgacagc	gcgcctaacc	tgggtatcgg	cacgattaat	gtcgtatgtg	ctgctgatgt	5040
gctgattggt	cccacgcctg	ctgagttggt	tgactacacc	tccgcactgc	agtttttcga	5100
tatgcttcgt	gatctgctca	agaacgttga	tcttaaaggg	ttcgagcctg	atgtacgtat	5160
tttgcttacc	aaatacagca	atagtaatgg	ctctcagtcc	ccgtggatgg	aggagcaaAT	5220
tcgggatgcc	tggggaagca	tggttctaaa	aatgttgta	cgtgaaacgg	atgaagttgg	5280
taaaggtcag	atccggatga	gaactgtttt	tgaacaggcc	attgatcaac	gctcttcaac	5340
tgggtgcctgg	agaaatgctc	tttctatttg	ggaacctgtc	tgcaatgaaa	ttttcgatcg	5400
tctgattaaa	ccacgctggg	agattagata	atgaagcgtg	cgcctgttat	tccaaaacat	5460
acgtcaata	ctcaaccggg	tgaagatact	tcgttatcga	caccagctgc	cccgatgggtg	5520
gattcgtaa	ttgcgcgcgt	aggagtaatg	gctcgcggta	atgccattac	tttgccctgta	5580
tgtggtcggg	atgtgaagtt	tactcttgaa	gtgctccggg	gtgatagtgt	tgagaagacc	5640
tctcgggtat	ggtcaggtaa	tgaacgtgac	caggagctgc	ttactgagga	cgcactggat	5700
gatctcatcc	cttcttttct	actgactggg	caacagacac	cggcgttcgg	tcgaagagta	5760
tctgggtgtca	tagaaattgc	cgatgggagt	cgccgtcgta	aagctgctgc	acttaccgaa	5820
agtgattatc	gtgttctggg	tggcgagctg	gatgatgagc	agatggctgc	attatccaga	5880
ttgggtaacg	attatcgccc	aacaagtgct	tatgaacgtg	gtcagcgtta	tgcaagccga	5940
ttgcagaatg	aatttgctgg	aaatatttct	gcgctggctg	atgcggaaaa	tatttcacgt	6000
aagattatta	cccgtgtgat	caacaccgcc	aaattgccta	aatcagttgt	tgctcttttt	6060
tctcaccocg	gtgaactatc	tgcccgggtca	ggtgatgcac	ttcaaaaagc	ctttacagat	6120
aaagaggaat	tacttaagca	gcaggcatct	aaccttcatg	agcagaaaaa	agctgggggtg	6180
atatttgaag	ctgaagaagt	tatcactctt	ttaacttctg	tgcttaaaac	gtcatctgca	6240

tcaagaacta	gtttaagctc	acgacatcag	tttgctcctg	gagcgacagt	attgtataag	6300
ggcgataaaa	tggtgcttaa	cctggacagg	tctcgtgttc	caactgagtg	tatagagaaa	6360
attgaggcca	ttcttaagga	acttgaaaag	ccagcacccct	gatgcgacca	cgtttttagtc	6420
tacgtttatc	tgtctttact	taatgtcctt	tgttacaggc	cagaaagcat	aactggcctg	6480
aatattctct	ctgggcccac	tggtccactt	gtatcgtcgg	tctgataatc	agactgggac	6540
cacggtocca	ctcgtatcgt	cggtctgatt	attagtctgg	gaccacggtc	ccactcgtat	6600
cgtcggctctg	attattagtc	tgggaccacg	gtcccactcg	tatcgtcggg	ctgataatca	6660
gactgggacc	acgggtcccac	tcgtatcgtc	ggctctgatta	ttagtctggg	accatgggtcc	6720
cactcgtatc	gtcgggtctga	ttattagtct	gggaccacgg	tcccactcgt	atcgtcggtc	6780
tgattattag	tctggaacca	cggtcccact	cgtatcgtcg	gtctgattat	tagtctggga	6840
ccacgggtccc	actcgtatcg	tcgggtctgat	tattagtctg	ggaccacgat	cccactcgtg	6900
ttgtcgggtct	gattatcggg	ctgggaccac	gggtcccactt	gtattgtcga	tcagactatc	6960
agcgtgagac	tacgattcca	tcaatgcctg	tcaagggcaa	gtattgacat	gtcgtcgtaa	7020
cctgtagaac	ggagtaacct	cggtgtgcgg	ttgtatgcct	gctgtggatt	gctgctgtgt	7080
cctgcttata	cacaacattt	tgcgcacggg	tatgtggaca	aaatacctgg	ttaccacaggc	7140
cgtgccggca	cgtaaacggg	gctgcatccg	atgcaagtgt	gtcgtctgtc	agtttaaaca	7200
tgcatagtta	ttaatagtaa	tcaattacgg	ggtcattagt	tcatagccca	tatatggagt	7260
tccgcgttac	ataacttacg	gtaaatggcc	cgccctggctg	accgcccac	gacccccgcc	7320
cattgacgtc	aataatgacg	tatgttccca	tagtaacgcc	aatagggact	ttccattgac	7380
gtcaatgggt	ggagtattta	cggtaaactg	cccacttggc	agtacatcaa	gtgtatcata	7440
tgccaagtac	gccccctatt	gacgtcaatg	acggtaaagt	gcccgcctgg	cattatgccc	7500
agtacatgac	cttatgggac	tttcctactt	ggcagtacat	ctacgtatta	gtcatcgcta	7560
ttaccatggg	gatgcgggtt	tggcagtaca	tcaatggggc	tggatagcgg	tttgactcac	7620
ggggattttcc	aagtctccac	cccattgacg	tcaatggggag	tttgtttttg	caccaaatac	7680
aacgggactt	tccaaaatgt	cgtaacaact	ccgccccatt	gacgcaaagt	ggcggtaggc	7740
gtgtacgggtg	ggagggtctat	ataagcagag	ctggtttagt	gaaccgtcag	atccgctagc	7800
gctaccgggtc	gccaccatgg	tgagcaaggg	cgaggagctg	ttcaccgggg	tggtgcccac	7860
cctgggtcgag	ctggacggcg	acgtaaacgg	ccacaagtcc	agcgtgtccg	gcgagggcga	7920
gggcgatgcc	acctacggca	agctgaccct	gaagttcatc	tgcaccaccg	gcaagctgcc	7980
cgtgcctctg	cccaccctcg	tgaccaccct	gacctacggc	gtgcagtgct	tcagccgcta	8040

```

ccccgaccac atgaagcagc acgacttctt caagtccgcc atgcccgaag gctacgtcca 8100
ggagcgcacc atcttcttca aggacgacgg caactacaag acccgcgccg aggtgaagtt 8160
cgagggcgac accctggtga accgcatcga gctgaagggc atcgacttca aggaggacgg 8220
caacatcctg gggcacaagc tggagtacaa ctacaacagc cacaacgtct atatcatggc 8280
cgacaagcag aagaacggca tcaaggtgaa cttcaagatc cgccacaaca tcgaggacgg 8340
cagcgtgcag ctcgccgacc actaccagca gaacaccccc atcggcgacg gccccgtgct 8400
gctgccccgac aaccactacc tgagcaccca gtccgccctg agcaaagacc ccaacgagaa 8460
gcgcgatcac atggtcctgc tggagtctgt gaccgccgcc gggatcactc tcggcatgga 8520
cgagctgtac aagtccggac tcagatccac cggatctaga taactgatca taatcagcca 8580
taccacattt gtagaggttt tacttgcttt aaaaaacctc ccacacctcc ccctgaacct 8640
gaaacataaa atgaatgcaa ttgttggtgt taacttgttt attgcagctt ataatgggta 8700
caaataaagc aatagcatca caaatctcac aaataaagca tttttttcac tgcattctag 8760
ttgtggtttg tccaaactca tcaatgtatc ttaaattggc gcataacttc gtatagcata 8820
cattatacga agttatctag cagatctgaa ttcgatatca agctgcggcc ttaattaa 8878

```

```

<210> 8
<211> 124884
<212> DNA
<213> Varicella zoster

```

```

<220>
<221> CDS
<222> (1134) .. (1850)

```

```

<220>
<221> CDS
<222> (8607) .. (9386)

```

```

<220>
<221> CDS
<222> (10642) .. (10902)

```

```

<220>
<221> CDS
<222> (11009) .. (11917)

```

```

<220>
<221> CDS
<222> (12160) .. (13392)

```

```

<220>
<221> CDS
<222> (13590) .. (16049)

```

```

<220>

```

<221> CDS
 <222> (16214) .. (18199)

 <220>
 <221> CDS
 <222> (18441) .. (19346)

 <220>
 <221> CDS
 <222> (24149) .. (25516)

 <220>
 <221> CDS
 <222> (30759) .. (33875)

 <220>
 <221> CDS
 <222> (34083) .. (42374)

 <220>
 <221> CDS
 <222> (44506) .. (46263)

 <220>
 <221> CDS
 <222> (50857) .. (54471)

 <220>
 <221> CDS
 <222> (54651) .. (56963)

 <220>
 <221> CDS
 <222> (57008) .. (59614)

 <220>
 <221> CDS
 <222> (59766) .. (60197)

 <220>
 <221> CDS
 <222> (64807) .. (65832)

 <220>
 <221> CDS
 <222> (66074) .. (68599)

 <220>
 <221> CDS
 <222> (70633) .. (71355)

 <220>
 <221> CDS
 <222> (71540) .. (75730)

 <220>
 <221> CDS
 <222> (75847) .. (76797)

 <220>

<221> CDS
<222> (78170) .. (80200)

<220>
<221> CDS
<222> (80360) .. (81451)

<220>
<221> CDS
<222> (82719) .. (83318)

<220>
<221> CDS
<222> (84667) .. (86322)

<220>
<221> CDS
<222> (87881) .. (90388)

<220>
<221> CDS
<222> (90493) .. (92808)

<220>
<221> CDS
<222> (95996) .. (98641)

<220>
<221> CDS
<222> (110581) .. (111417)

<220>
<221> CDS
<222> (111565) .. (112107)

<220>
<221> CDS
<222> (113037) .. (114218)

<220>
<221> CDS
<222> (114496) .. (115560)

<220>
<221> CDS
<222> (115808) .. (117679)

<220>
<221> CDS
<222> (120764) .. (124696)

<400> 8
aggccagccc tctcgcggcc ccctcgagag agaaaaaaaa aagcgacccc acctccccgc 60
gcgtttgctg ggcgaccatc ggggggggatg ggattttttg ccgggaaacc cccccccgcc 120
agcctttaac aaaacccgcg ccttttgcgt ccaccctcg tttactgctc ggatggcgac 180
cgtgcactac tcccgccgac ctgggacccc gccggtcacc ctcacgtcgt cccccagcat 240

ggatgacgtt gcgacccccca tcccctacct acccacatac gccgaggccg tggcagacgc	300
gcccccccct tacagaagcc gcgagagtct ggtgtttctcc ccgcctcttt ttcttcacgt	360
ggagaatggc accacccaac agtcttacga ttgcctagac tgcgcttatg atggaatcca	420
cagacttcag ctggctttttc taagaattcg caaatgctgt gtaccggctt ttttaattct	480
ttttggtatt ctcaccctta ctgctgtcgt ggtcgccatt gttgccgttt ttcccaggga	540
acctcccaac tcaactacat gaaactactg tccggaaggg gaaggatattt attctcgctt	600
gcagcttgtc gcgcgtgtat gcacaacaaa agctatatat gtcaccaaaag ccaacgtcgc	660
catctggagt actacacca gtacgttgca taacctgtcc atttgcattht tcagttgcgc	720
ggacgccttt ctccgggatc gtggccttgg gacatcaacc agtggaataa gaaccgccgg	780
tggtcttggt tgaacgacga gtggcgacgc gttgtttctgc ataagctctg tatgctgata	840
cataaacaca gagtctgtat cgctatcaga ttcccgaaca ctttccggta ccccatactc	900
cgataccctg gacattgcgg atccccaaaa tataatatta acaggatttg cttatacttt	960
gctacagctt atataaattht atgtgctgata catcttaagt gcatccgtac gttatthtata	1020
cattgcctgt cacgtgaaaa gactgtgtta cccaataaag gttctacaaa aaatgcttht	1080
ttgggtgtht gthtaatagc tattatcgta acccaccccc gtaaaatcat aaa atg	1136
	Met
	1
cat gta att tct gag aca ctt gca tat ggg cat gtt ccc gca ttt att	1184
His Val Ile Ser Glu Thr Leu Ala Tyr Gly His Val Pro Ala Phe Ile	
	5 10 15
atg ggc tcc act ctg gtg cgt ccc agt tta aac gcc acc gcc gag gaa	1232
Met Gly Ser Thr Leu Val Arg Pro Ser Leu Asn Ala Thr Ala Glu Glu	
	20 25 30
aat ccc gcg tca gaa acg cga tgt tta tta cga gtg ctt gcg ggg aga	1280
Asn Pro Ala Ser Glu Thr Arg Cys Leu Leu Arg Val Leu Ala Gly Arg	
	35 40 45
act gta gac ctg cca ggc gga gga acg tta cac att acc tgt acc aaa	1328
Thr Val Asp Leu Pro Gly Gly Gly Thr Leu His Ile Thr Cys Thr Lys	
	50 55 60 65
acc tat gta att att ggc aaa tat agc aaa ccc ggc gaa cgt ctt agc	1376
Thr Tyr Val Ile Ile Gly Lys Tyr Ser Lys Pro Gly Glu Arg Leu Ser	
	70 75 80
ctt gcc cgt cta ata ggg cgt gca atg acg cct gga ggt gca agg aca	1424
Leu Ala Arg Leu Ile Gly Arg Ala Met Thr Pro Gly Gly Ala Arg Thr	
	85 90 95
ttt att att ttg gcg atg aag gaa aag cga tcc aca acg ctt ggg tat	1472
Phe Ile Ile Leu Ala Met Lys Glu Lys Arg Ser Thr Thr Leu Gly Tyr	
	100 105 110

gaa tgt ggt acg ggc ttg cat tta ctg gct cca tct atg ggt aca ttt	1520
Glu Cys Gly Thr Gly Leu His Leu Leu Ala Pro Ser Met Gly Thr Phe	
115 120 125	
ctc cgc aca cac ggt tta agt aac aga gat ctc tgt tta tgg cgg ggt	1568
Leu Arg Thr His Gly Leu Ser Asn Arg Asp Leu Cys Leu Trp Arg Gly	
130 135 140 145	
aat att tat gat atg cat atg caa cgt ctt atg ttt tgg gag aat atc	1616
Asn Ile Tyr Asp Met His Met Gln Arg Leu Met Phe Trp Glu Asn Ile	
150 155 160	
gcg caa aat acc act gaa aca cct tgt ata acg tcg acg tta aca tgc	1664
Ala Gln Asn Thr Thr Glu Thr Pro Cys Ile Thr Ser Thr Leu Thr Cys	
165 170 175	
aac ttg aca gaa gac tct ggt gaa gcc gca ctt acc acg tca gac cga	1712
Asn Leu Thr Glu Asp Ser Gly Glu Ala Ala Leu Thr Thr Ser Asp Arg	
180 185 190	
ccc act ctc cca acc cta aca gcc caa gga aga cca aca gtt tcc aac	1760
Pro Thr Leu Pro Thr Leu Thr Ala Gln Gly Arg Pro Thr Val Ser Asn	
195 200 205	
att cgt gga ata ttg aaa gga tcc ccc cgt caa cag ccg gtc tgt cac	1808
Ile Arg Gly Ile Leu Lys Gly Ser Pro Arg Gln Gln Pro Val Cys His	
210 215 220 225	
cgg gtt aga ttt gcc gaa cct acg gag ggc gta ttg atg taa	1850
Arg Val Arg Phe Ala Glu Pro Thr Glu Gly Val Leu Met	
230 235	
tcactaaata aaatacacct tttttcgtatt gtacgtatatt ttatttaaata gtgtagttca	1910
tagtccgccc acagccgctc gggcttttcc cccacataca acatgatcgt atgcctcgga	1970
tgcaccggtc caacactccg ccgagaaggg ggatttacia tgacagtgat acccaatagc	2030
cgccagatgt acaccagct gtccggactc cagcatcatc tgctgagttg cggcgctgaa	2090
gggtgcatcg cataggggtgt tataattagc catttccggt aacagtcgtt gggaatttag	2150
gaggctgcaa aacggctgta ggtcaacata cattggggat tcagatgggt tatctcgacg	2210
tccaagtcca atcaaaaaag cgtgtaaatc atcagcccgg ccgcatgttg ctcgaagagc	2270
acataacctc ttaacaccgt acagagggga tggcgtcgggt gcatgtgagt tggcagggca	2330
tgtccacggt gtttccaacg ccagtggcgg tataacttgt gtaaacgacg ccaacgggtc	2390
aggtttaaga ttcactcgga tgggttgact gctttcggaa gctcccgttg tatccattaa	2450
ttaaacgttc ggtacacgtc tgggtgtgtgt ttaccocgaa tcagagacgg aattgcaaag	2510
atattggttt gaaagcaatg taatcccgcc catatatccc caacgtcgcc ttaaaaactc	2570
ccacaatatt acatttttat tagtctttta ttaatataga atcacataaa caattgataa	2630
aatcaagggg tgggtgtataa tgattaaaaa tataaattga tatgttttac aagcatgaaa	2690

taggtattta	ctattctaac	aggtaaatat	gcttaatgat	taaaaataca	aattagtatg	2750
ttttgacaag	catgaaaaag	gtatttttta	tttttagcagt	taaagggtact	acacttaaaa	2810
tattttaccgt	atggacgggc	gtcagaaaga	tgcccggccc	aagttgagag	ggtacattca	2870
acacgaccac	actcgcgttg	gtgggtgatt	agggcctcta	aaacaccggc	cagacatgac	2930
cgggtgtat	attcttgtaa	cacttgaacg	ttacaactga	tatcatcata	ttccacaaat	2990
ttagagccac	ggacaactat	attagcaatg	cgggcaatca	taacaaacat	ataagtagta	3050
atacacgtga	tatcactaaa	acgttgctgg	cgcaacagtt	cggggagagt	acgagacccc	3110
aaatcgttgt	ccctgttttag	aagaagacat	cttacaaaag	gccccagctt	taactttaaa	3170
ttctccaaaa	gtgacttcga	ggttgcaaca	atgggattat	ttgtgtagat	gggcaagttt	3230
tttgccgcta	acattttaat	ccacgttaac	agttcatccg	cagactccaa	cgcttcaatc	3290
aaagattctc	cacgtatgac	tctctcacgc	aacgcgcggg	caatacgtga	gtccatttta	3350
tatgactcaa	aggtacgata	aagttcatgt	ccgtacaaca	tcaactccgg	ccaagatgtg	3410
ttttgtttta	tccccggaag	acatccaccg	gaagcccatg	aatcacccctc	ttgtattgtg	3470
gcatatcgga	ctaccagttt	ttcaattggt	tcattctaaat	ggcgtaccga	gtcaatggtc	3530
acgctggctc	ccgcggtgga	gacgacttca	atagcacggc	ccgtaattcg	atcgaccggg	3590
atatcatact	cttttcgaat	acgctctcgg	cgggcgtctc	tcttggaaaa	tcgcaacctg	3650
tacgattcgt	catgtgtctg	atcattttctt	tctcccgtgg	tcattgcagg	aggcgttgta	3710
ggacgccgtc	ttcgatttga	cagggatcga	tcacgggtgtt	ttcttgaact	ttgagtgtta	3770
taagatctgg	atgatcgctg	atgtccccgt	tcgatgcgtg	catatccagt	ctccacgtct	3830
cttctcccat	gatgggttga	atcgggtaat	acaacaacca	aagttttcgg	gcgattgtgg	3890
tggtagcttt	cacgccttcc	gtgccttcgt	ttggaatacc	gtggattata	tgctgtatct	3950
gcagtacgct	ccacatacac	agttctagac	gttgtggagt	cctcgcctgg	agtggagcca	4010
atagcttcat	catttgccca	atcgggtgact	tccaatgcaa	agtcatccga	aggttcgtct	4070
ggtagcaa	tcataaagtc	ttcacaaata	gtagacacgt	ctgggtcggg	tggaattgaa	4130
gcagaggcca	tggctgcaaa	atatctgaca	attgcgtgtt	tgcagttgcc	tgtatcttcc	4190
gccaatgttg	tagaatttat	aggctcacc	aaccccgcaa	tgggcgtgtt	tagtcacatg	4250
attaatgctt	ctgggagttt	tcactttccc	caaacaagct	tacctgcacc	ctttgttcgt	4310
aatgcataaa	aataaccact	gctatagcaa	atatgacgat	ataaaaacat	tttatagcaa	4370
ggccggacat	tactgtagcg	caacatgttg	tgcataatac	acgtattccc	cccgtattga	4430
tatgatttaa	atgattatcc	ttgggttggt	ttggtctaac	ataagatata	agctctacta	4490

tagcgagcgt	gcatacaaca	acccaggcca	gaatccgaat	gtatgtgggg	tataataacg	4550
cgcattggtgt	atatgcaacg	ccaagcgtta	aaagcacaat	acatccagat	gatatatgag	4610
cgataacctc	caaaagcatc	aataacgtaa	cacctttatg	catatataaa	aaactttatag	4670
ggtcagcatt	aaatacttta	ctcataccat	cccgtcgc	ggaaacatca	cataacaacc	4730
ttgccaaactt	tgtatatggg	taaccaagaa	gaatgttcga	aataacccgt	gttacgtaat	4790
tcagtgaata	tgatgtgggg	gatattaact	cacaggatga	tcggaatggc	ccaaacatac	4850
gacgtattcg	tcgaaattgt	aaatacatac	catatacaaa	ccatgcaaaa	aaaatcattt	4910
ttagctgcac	gcaccaaaaa	taagcgtgac	aattacgtgt	tcccagaaca	attcgaattt	4970
tgtcatgcaa	aggtgtagaa	atagcggttt	ttaccatagt	atctcctgat	aatagatttt	5030
cccggcagct	gtaatcgtat	ccagataggc	catccaaaaa	cggtgagtgg	tttaciaaacg	5090
ttacatatat	aagagagttg	ttataagacc	cccatacaac	cggtccacca	ttaatcaccg	5150
tggttgcata	cacacactca	tgttcaaact	ttacacgagc	ggtataccat	agggtaaaaa	5210
cagcatgtcc	gctaagtaga	cacataatta	taaaatgttc	tgtcttgatt	cctaaagcct	5270
gcatgacccg	tggaagatgg	caattcaagc	acgatgtagt	atcacacggg	tggtgttaac	5330
tcgaagttaa	atttggataa	ttaggtactt	ctagagtaaa	gattgtatgc	atgacgattgc	5390
tatcgcactt	tgtagcaaaa	cattgttgtg	caagcgaaat	acacaaacgg	ttgtgatgat	5450
ccactcgcag	agacacaaat	gtccggggag	ccgttcttcc	tccgcgatgg	ggatatcgaa	5510
gacaagtga	cccttttggt	ccgcatatga	gctgaaataa	caccacagtc	cttttgatgg	5570
cgatacactt	tgatgatgtt	aaggtatatt	cgcgatcacg	cccggggaaa	tgaacagcaa	5630
tatgctccac	aatagattct	aatattgtgc	tgtcgacaaa	ggcctccagt	gtaaatgcgt	5690
ccagacaagt	taccccgcg	tcttttagag	cctttgttaa	agatatttgc	ggggagctaa	5750
atatttggtt	attacgcgca	accttacgtt	caaaaaactc	tgcgtattcc	cccccaaggt	5810
tatgtaaaat	aaattgcact	ggaacattcg	actgcggtct	tgaatgaaaa	tgaaagtttg	5870
ccgggtttct	atgtgatgtc	acaaacgcta	atatatcaat	acactgctca	ggtacaacat	5930
aaaatgggag	tagttgtcca	accgccgtcc	ctgtggttgt	tactttggag	aaaaaaggca	5990
gtcttaaact	atgtccgtgg	ctataaacac	cagtatctat	aaacgaaaag	tcccgtaaat	6050
acggaccaat	atattcaaca	aattcccgtt	ccagcaaacac	cgcttgctgt	aatatttgtg	6110
caaaccctt	taaagtggaa	gaccccaacta	acgcataggg	atttgggatt	ggtacgcata	6170
ccctgaaacc	tattttctct	ttacagttac	agggtagagt	ttcatgcaag	ttttcattgt	6230
ttgatacatc	ggcgtgtgta	tggacttcag	acgttgtctg	tgtatcaaaa	aaccatacat	6290

cctctgtata attctcttct acacacgtgt ataattcgcc attttctatg taaaaatcga	6350
tgtcagaatg gctgggttata tccaataaat tatcatcatc caacacctca acggtagggt	6410
caggacatgc agttttataa aaataacatg ggtctttgtt agggtttacc acggcctttg	6470
gaaaaagtaa ttgcatggcc gttaaaatac catgacgaaa tgctcgcatg ccggcatgta	6530
aaatacccaa tgggatgggt tttcttataat gaaagtctac atcaagtatg aggtttgtga	6590
ttataagatt tgtattaaat agctcattcc tgtttatata aagctgatct ttgggtatgt	6650
ttgatgaaat tttagaaacg tttttaacag acgtagataa tagtaaagtc aactgcatat	6710
ctcgtagtga agcggcaaca aaattacatg gattaatttg tttaagggtcc tccgcaatta	6770
atcgagcctc gtgcggtaaa gtgtaacggt ttgttattga tgaccacgta tcattagcaa	6830
taacagcaaa tgcttgggcg ccgtgaggca aggctaccgg atatacaggc attgggtccag	6890
ttacctcaga atggccgatg agggcttcta atggagtttt ataactcagg atggatacat	6950
catgtgtggc tatcccagtg gcagcagaga aaaacagtaa tagttttgta atccccgggc	7010
tcgtatcaaa accagtacga ccactttggt taggtgtatc gtttgcaaag ttggctgctc	7070
gtaacgcctc cgcggaaca cccgaatcct caaaattaga caattcgta aaaccgggtg	7130
gatttgaggg aatagtggag gaccatccat atggactaaa ttgtttttca atgttttcca	7190
cacgacgagt tagcgttgta gctagggtcac atacgcctat aaacttgcta ggttttgcgg	7250
catacgtaag acttaaagta tatgttttag taattgtata tttatgtcca atctcaggtc	7310
caagttcagt gacatcacia attacgttct tttttatata gtcacgcatg ttgagacgag	7370
aacgtacatg attaaaaaaa ttagcagtag ctctttttcc caggttggat gattttaaga	7430
ggaccggttt attcacaaaa tctgagtatg taaccgcttg taggtggtct gcgatctgtt	7490
tccgattgaa acattcaaaa tgtgccagat aaatataatc aacaaattca cggctctggaa	7550
ctttaaggcc ttttctatcg ttggtaatat actccgatac tgcggtgtatt tccgttggtg	7610
ctgtatgtat tcgctgtaaa atgtacgata gagcattttt ggctgtcaaa cctcgtgtat	7670
atgttgagga acaacaaaac atggaaagtt tatcaaaaga caacaagtcc gaaatattgt	7730
accactaca attaggtaat gccgggactt ggtaagttaa aaacaaatct ttaattgcct	7790
gtaagtcata taaggggggt tccaacgtat tgtaacttgt gtccgtttgt aacaagtaat	7850
agcgtgtagc caacactagc gttttttcag agggtcctaaa tcgaacaata taccaaaacg	7910
gcgagcatcc atacccccag tagagtcgtc gatatgcagc caatacttga cgttcgtaat	7970
gggcatataa tgatgttagc tcctgacgac caacggattt tttaactaac ttgcagagtg	8030
ttgcctctgt gatgcatagg ccgttggtccg ataatccctt tcggtttaaa tgggtgtgtg	8090

ttaccatcag agtttgtata acttccgagt gaatgtcaaa cgtctccgat atacataggg	8150
tatcagatat tatatgcgga tttaggggtg ctccatacca taacgcctta tataaagctt	8210
taaaatcagt ttgggttttta aaacaacaaa aaaatatagg ccagacccgg gatcgtacat	8270
ctccagttga aaatccacca attaaataaa aaataacggt gacgtcccta ctacaaaata	8330
aatgcattat ttgggttttct tcatcgtttt cagttacttc acgtgggcgt ttagttggga	8390
ttacttgcgat gatctcttcc ctcccatttt tgacaaagac gtcatactaa tcgggagttc	8450
aagtataact caccacatac agagggttctg tgcttatctg cccggtaagc aacaacagcg	8510
agtgggagat tgcacatccc tttgtggcaa ataataaccg aatcgtcggg ttggaggatt	8570
tatccatagt tcaatacgtt ggaaagccag tcaatc atg cag acg gtg tgt gcc	8624
	Met Gln Thr Val Cys Ala
	240
agc tta tgt gga tat gct cga ata cca act gaa gag cca tct tat gaa	8672
Ser Leu Cys Gly Tyr Ala Arg Ile Pro Thr Glu Glu Pro Ser Tyr Glu	
245 250 255 260	
gag gtg cgt gta aac acg cac ccc caa gga gcc gcc ctg ctc cgc ctc	8720
Glu Val Arg Val Asn Thr His Pro Gln Gly Ala Ala Leu Leu Arg Leu	
265 270 275	
caa gag gct tta acc gct gtg aat gga tta ttg cct gca cct cta acg	8768
Gln Glu Ala Leu Thr Ala Val Asn Gly Leu Leu Pro Ala Pro Leu Thr	
280 285 290	
tta gaa gac gta gtc gct tct gca gat aat acc cgt cgt ttg gtc cgc	8816
Leu Glu Asp Val Val Ala Ser Ala Asp Asn Thr Arg Arg Leu Val Arg	
295 300 305	
gcc cag gct ttg gcg cga act tac gct gca tgt tct cgt aac att gaa	8864
Ala Gln Ala Leu Ala Arg Thr Tyr Ala Ala Cys Ser Arg Asn Ile Glu	
310 315 320	
tgt tta aaa cag cac cat ttt act gaa gat aac ccc ggt ctt aac gcc	8912
Cys Leu Lys Gln His His Phe Thr Glu Asp Asn Pro Gly Leu Asn Ala	
325 330 335 340	
gtg gtc cgt tca cac atg gaa aac tca aaa cgg ctt gct gat atg tgt	8960
Val Val Arg Ser His Met Glu Asn Ser Lys Arg Leu Ala Asp Met Cys	
345 350 355	
tta gct gca att acc cat ttg tat tta tcg gtt ggc gcg gtg gat gtt	9008
Leu Ala Ala Ile Thr His Leu Tyr Leu Ser Val Gly Ala Val Asp Val	
360 365 370	
act acg gat gat att gtc gat caa acc ctg aga atg acc gct gaa agt	9056
Thr Thr Asp Asp Ile Val Asp Gln Thr Leu Arg Met Thr Ala Glu Ser	
375 380 385	
gaa gtg gtc atg tct gat gtt gtt ctt ttg gag aaa act ctt ggg gtc	9104
Glu Val Val Met Ser Asp Val Val Leu Leu Glu Lys Thr Leu Gly Val	
390 395 400	

gtt gct aaa cct cag gca tcg ttt gat gtt tcc cac aac cat gaa tta	9152
Val Ala Lys Pro Gln Ala Ser Phe Asp Val Ser His Asn His Glu Leu	
405 410 415 420	
tct ata gct aaa ggg gaa aat gtg ggt tta aaa aca tca cct att aaa	9200
Ser Ile Ala Lys Gly Glu Asn Val Gly Leu Lys Thr Ser Pro Ile Lys	
425 430 435	
tcg gag gcg aca caa tta tct gaa att aaa ccc cca ctt ata gaa gta	9248
Ser Glu Ala Thr Gln Leu Ser Glu Ile Lys Pro Pro Leu Ile Glu Val	
440 445 450	
tcg gat aat aac aca tct aac cta aca aaa aaa acg tat ccg aca gaa	9296
Ser Asp Asn Asn Thr Ser Asn Leu Thr Lys Lys Thr Tyr Pro Thr Glu	
455 460 465	
act ctt cag ccc gtg ttg acc cca aaa cag acg caa gat gta caa cgc	9344
Thr Leu Gln Pro Val Leu Thr Pro Lys Gln Thr Gln Asp Val Gln Arg	
470 475 480	
aca acc ccc gcg atc aag aaa tcc cat gtt atg ctt gta taa	9386
Thr Thr Pro Ala Ile Lys Lys Ser His Val Met Leu Val	
485 490 495	
atattgaaat aaaaactaaa aacgtttctg gtgtatgttt ttattttgta tataaaatta	9446
aaacattgct ggctggcgtg gttattacat ttaatgtttt agtagaaaat cgacatcggt	9506
tgtttcttta tcagttgaac caaatccacg cgttccccgt tcgctgggtg tggctattag	9566
atctaacggt ttagtaaaat accattgtac acccggtatg ccacatttac cgcggatagc	9626
ataaggaaat gcaatattac ttaaaacggt gtgtttttaag tgtatttggg tgttgtgatc	9686
tattaacagg acctgtgcaa gacgatctcc cgtttttata cgtatgtcat caccggtgag	9746
attatatacg tagaatttac agtgttctcc tgcaggccat gccgttggac acacgataat	9806
gcctgatcgg cttttc gatg atcttccaaa aatataagcg tttatactcg gatgttgtaa	9866
gtcccagtct cttataatcg gtaagacaat ttttataaat tcattccttt ttaaataatag	9926
gttatatggg acacaaatat catatcccgc gtcttcttgg cgtttttggat tgatgatatg	9986
tttgtagggt aagggaacat cgatatggta ttctgcagaa tccctatgta aagggtgccc	10046
ctgctgtacc gtggaaatat cagcaaattc aggtataacg ggtttttcat aatttgacgg	10106
cgagtttgat aagggttgaa cttgtatcga tttaaaaatt ggatccagat gtttaagaac	10166
gttttttggg agaaggcgac tttgtcttaa ttttaccggg aacaagtaga ttgttaaagt	10226
tccgggtaaa ataacgggta ctccctggccg gtaatacaaa agggctgaaa ttactcctct	10286
gtaacccgca tcaataactc cgttggcgac aaaaaaattg tcttcatcag caagggcagt	10346
atctttgcat tgaattaaca acagtgcgta ttcatggga ggcgccgact taaccaacag	10406
ctccaactgc tgcataataa aaccgccccg tgttacagat ttttcagatg gcagttcgag	10466

tttcttgtgg ttccggagta acaacggttg atgtcgactt actttatcgt ctaacacgca 10526
 ttgcagcgta tctgcacatt caggttgaac ttctattaaa attgtatcctt ttaaaccaccg 10586
 attcggaata gtttggctac aaaacatatc acctgtatctt actgccgttt ccaag atg 10644
 Met

 gga tca att acc gct tcg ttc ata tta ata acg atg caa att tta ttt 10692
 Gly Ser Ile Thr Ala Ser Phe Ile Leu Ile Thr Met Gln Ile Leu Phe
 500 505 510

 ttt tgt gaa gac agc agt ggg gag cca aac ttt gca gaa cgg aat ttt 10740
 Phe Cys Glu Asp Ser Ser Gly Glu Pro Asn Phe Ala Glu Arg Asn Phe
 515 520 525 530

 tgg cat gcc agc tgt tcg gct cgt gga gtt tat atc gac gga tca atg 10788
 Trp His Ala Ser Cys Ser Ala Arg Gly Val Tyr Ile Asp Gly Ser Met
 535 540 545

 atc acc acc ctt ttc ttc tac gca tcc ctt ttg ggg gtg tgt gta gcc 10836
 Ile Thr Thr Leu Phe Phe Tyr Ala Ser Leu Leu Gly Val Cys Val Ala
 550 555 560

 ctt att tcg tta gct tat cat gcg tgt ttc cgg tta ttt act cgt tct 10884
 Leu Ile Ser Leu Ala Tyr His Ala Cys Phe Arg Leu Phe Thr Arg Ser
 565 570 575

 gta tta cgc agc acg tgg taaacccgtt tgcctataaaa aggggcaggc 10932
 Val Leu Arg Ser Thr Trp
 580

 gtgtataaga gggccctgt ttaatacgcg gtctgccgtg tttggatatt tcacgaccct 10992

 atcgttttatt tacgta atg gca tct tcc gac ggt gac aga ctt tgt cgc tct 11044
 Met Ala Ser Ser Asp Gly Asp Arg Leu Cys Arg Ser
 585 590 595

 aat gca gtg cgt cgt aaa aca acg cct agt tat tcc gga caa tat cga 11092
 Asn Ala Val Arg Arg Lys Thr Thr Pro Ser Tyr Ser Gly Gln Tyr Arg
 600 605 610

 acc gcg cgg cga agt gtg gtc gta gga ccc ccc gat gat tca gac gac 11140
 Thr Ala Arg Arg Ser Val Val Val Gly Pro Pro Asp Asp Ser Asp Asp
 615 620 625

 tcg ttg ggt tac att acc aca gtt ggg gcc gat tct cct tct cca gtg 11188
 Ser Leu Gly Tyr Ile Thr Thr Val Gly Ala Asp Ser Pro Ser Pro Val
 630 635 640

 tac gcg gat ctt tat ttt gaa cat aaa aat acg acc cct cgc gta cat 11236
 Tyr Ala Asp Leu Tyr Phe Glu His Lys Asn Thr Thr Pro Arg Val His
 645 650 655 660

 caa cca aac gac tcc agc gga tcg gaa gat gac ttt gaa gac atc gat 11284
 Gln Pro Asn Asp Ser Ser Gly Ser Glu Asp Asp Phe Glu Asp Ile Asp
 665 670 675

 gaa gta gtg gcc gcc ttt cgg gag gcc cgt ttg aga cat gaa ctg gtt 11332
 Glu Val Val Ala Ala Phe Arg Glu Ala Arg Leu Arg His Glu Leu Val

680	685	690	
gaa gat gct gta tat gaa aac ccg cta agt gta gaa aaa cca tct aga Glu Asp Ala Val Tyr Glu Asn Pro Leu Ser Val Glu Lys Pro Ser Arg 695 700 705			11380
tct ttt act aaa aat gcg gcg gtt aaa cct aaa tta gag gat tca ccg Ser Phe Thr Lys Asn Ala Ala Val Lys Pro Lys Leu Glu Asp Ser Pro 710 715 720			11428
aag cga gct ccc ccg gga gca ggc gca att gcc agc ggg aga cca att Lys Arg Ala Pro Pro Gly Ala Gly Ala Ile Ala Ser Gly Arg Pro Ile 725 730 735 740			11476
tcc ttc agc act gca cca aaa acc gca aca agc tcg tgg tgc ggt cct Ser Phe Ser Thr Ala Pro Lys Thr Ala Thr Ser Ser Trp Cys Gly Pro 745 750 755			11524
acg cca tca tat aac aaa cgc gtc ttt tgt gaa gcg gtc cgg cgc gta Thr Pro Ser Tyr Asn Lys Arg Val Phe Cys Glu Ala Val Arg Arg Val 760 765 770			11572
gcc gcc atg cag gca caa aag gct gcc gaa gcg gct tgg aat agt aat Ala Ala Met Gln Ala Gln Lys Ala Ala Glu Ala Ala Trp Asn Ser Asn 775 780 785			11620
ccc cca agg aat aac gcc gaa tta gac cgt ttg tta acc gga gcc gtt Pro Pro Arg Asn Asn Ala Glu Leu Asp Arg Leu Leu Thr Gly Ala Val 790 795 800			11668
att cgt att acg gtg cat gag ggt tta aat tta ata caa gcc gct aat Ile Arg Ile Thr Val His Glu Gly Leu Asn Leu Ile Gln Ala Ala Asn 805 810 815 820			11716
gaa gca gac cta ggt gaa gga gca tcg gta tcc aaa cgt gga cat aat Glu Ala Asp Leu Gly Glu Gly Ala Ser Val Ser Lys Arg Gly His Asn 825 830 835			11764
cga aaa act gga gat tta cag ggg ggc atg ggt aat gaa cct atg tac Arg Lys Thr Gly Asp Leu Gln Gly Gly Met Gly Asn Glu Pro Met Tyr 840 845 850			11812
gca caa gtt cgt aag cca aaa agt cga acg gat aca caa acg act ggg Ala Gln Val Arg Lys Pro Lys Ser Arg Thr Asp Thr Gln Thr Thr Gly 855 860 865			11860
cgt ata act aat cga agt agg gcc cgt tct gca tca aga act gat acg Arg Ile Thr Asn Arg Ser Arg Ala Arg Ser Ala Ser Arg Thr Asp Thr 870 875 880			11908
cga aaa tag ggatataatt acgcagtaac ggtttaccg gtattatgta Arg Lys 885			11957
taataaataa acgtataaaa gacagtcgtg gtttgtgttt attataaatg tgtattatat			12017
gtcacatatt ataaactggt taaatagtag cacgtggtat tatgaacagt ttataatcag			12077
ttgctaccaa acaaacccca ttagacggcg ggttttgata aagggaatcg cttattttaa			12137

ctaaagattt tactctataa gt atg gag tgt aat tta gga acc gaa cat cct	12189
Met Glu Cys Asn Leu Gly Thr Glu His Pro	
890 895	
agt aca gat acg tgg aat cgt agt aaa acg gaa caa gcg gtt gtg gac	12237
Ser Thr Asp Thr Trp Asn Arg Ser Lys Thr Glu Gln Ala Val Val Asp	
900 905 910	
gca ttt gat gaa tcg ttg ttt ggt gat gta gca tcg gat att gga ttt	12285
Ala Phe Asp Glu Ser Leu Phe Gly Asp Val Ala Ser Asp Ile Gly Phe	
915 920 925	
gaa acg tcg tta tat tca cat gca gtt aaa act gct ccg tct ccg cct	12333
Glu Thr Ser Leu Tyr Ser His Ala Val Lys Thr Ala Pro Ser Pro Pro	
930 935 940	
tgg gta gct agc cct aaa att tta tat caa cag tta ata cgg gat ctt	12381
Trp Val Ala Ser Pro Lys Ile Leu Tyr Gln Gln Leu Ile Arg Asp Leu	
945 950 955 960	
gat ttt tca gaa ggg ccg cgt tta cta tca tgt ctt gaa acc tgg aac	12429
Asp Phe Ser Glu Gly Pro Arg Leu Leu Ser Cys Leu Glu Thr Trp Asn	
965 970 975	
gag gat tta ttc tca tgt ttt cct att aat gag gac cta tat tcc gat	12477
Glu Asp Leu Phe Ser Cys Phe Pro Ile Asn Glu Asp Leu Tyr Ser Asp	
980 985 990	
atg atg gtt tta tcc ccg gat cca gat gac gtt atc tca acc gtt tca	12525
Met Met Val Leu Ser Pro Asp Pro Asp Asp Val Ile Ser Thr Val Ser	
995 1000 1005	
acc aaa gac cat gtt gaa atg ttt aat tta aca acc ccg ggt tcc	12570
Thr Lys Asp His Val Glu Met Phe Asn Leu Thr Thr Arg Gly Ser	
1010 1015 1020	
gtt cga ttg cct agt cca cca aag caa ccg acg ggg ctt cca gct	12615
Val Arg Leu Pro Ser Pro Pro Lys Gln Pro Thr Gly Leu Pro Ala	
1025 1030 1035	
tac gtt cag gag gtc cag gat tcg ttt acc gta gaa cta cgc gcc	12660
Tyr Val Gln Glu Val Gln Asp Ser Phe Thr Val Glu Leu Arg Ala	
1040 1045 1050	
cgg gaa gaa gca tac aca aaa cta cta gtt act tat tgt aaa tcg	12705
Arg Glu Glu Ala Tyr Thr Lys Leu Leu Val Thr Tyr Cys Lys Ser	
1055 1060 1065	
att ata cgt tat ctc caa gga acg gcg aaa agg acg aca ata ggt	12750
Ile Ile Arg Tyr Leu Gln Gly Thr Ala Lys Arg Thr Thr Ile Gly	
1070 1075 1080	
ctt aat ata caa aac cct gac cag aaa gct tac acg caa ctc agg	12795
Leu Asn Ile Gln Asn Pro Asp Gln Lys Ala Tyr Thr Gln Leu Arg	
1085 1090 1095	
caa agt att cta ctt aga tat tat cgt gag gtg gca agt ttg gcg	12840
Gln Ser Ile Leu Leu Arg Tyr Tyr Arg Glu Val Ala Ser Leu Ala	
1100 1105 1110	

cgt ctt ctg tac cta cat tta tat tta acc gta acg cgt gaa ttt	12885
Arg Leu Leu Tyr Leu His Leu Tyr Leu Thr Val Thr Arg Glu Phe	
1115 1120 1125	
tcc tgg cgt ttg tac gcc agt caa tct gca cac ccg gac gtg ttt	12930
Ser Trp Arg Leu Tyr Ala Ser Gln Ser Ala His Pro Asp Val Phe	
1130 1135 1140	
gcg gct tta aaa ttc acc tgg acc gaa cgt cga cag ttc acg tgt	12975
Ala Ala Leu Lys Phe Thr Trp Thr Glu Arg Arg Gln Phe Thr Cys	
1145 1150 1155	
gcg ttt cat cct gta tta tgc aac cac ggc att gtg tta tta gaa	13020
Ala Phe His Pro Val Leu Cys Asn His Gly Ile Val Leu Leu Glu	
1160 1165 1170	
ggg aaa cca cta aca gcg tct gcc ttg agg gaa ata aat tac cgc	13065
Gly Lys Pro Leu Thr Ala Ser Ala Leu Arg Glu Ile Asn Tyr Arg	
1175 1180 1185	
cgc cga gaa ctg gga ctg cct cta gtt aga tgt ggt ctt gtt gaa	13110
Arg Arg Glu Leu Gly Leu Pro Leu Val Arg Cys Gly Leu Val Glu	
1190 1195 1200	
gaa aac aaa tct ccg ttg gtt caa caa ccc tca ttt tcg gtt cat	13155
Glu Asn Lys Ser Pro Leu Val Gln Gln Pro Ser Phe Ser Val His	
1205 1210 1215	
tta cca cgg tcg gtg ggt ttt ctt acc cac cac att aag cgt aag	13200
Leu Pro Arg Ser Val Gly Phe Leu Thr His His Ile Lys Arg Lys	
1220 1225 1230	
tta gac gca tat gcg gtc aaa cat cct caa gaa ccg aga cat gta	13245
Leu Asp Ala Tyr Ala Val Lys His Pro Gln Glu Pro Arg His Val	
1235 1240 1245	
cga gcg gat cat cct tac gca aaa gtt gtt gaa aat aga aac tac	13290
Arg Ala Asp His Pro Tyr Ala Lys Val Val Glu Asn Arg Asn Tyr	
1250 1255 1260	
ggt agt agc atc gaa gct atg att tta gca cct ccg tcc cca tcc	13335
Gly Ser Ser Ile Glu Ala Met Ile Leu Ala Pro Pro Ser Pro Ser	
1265 1270 1275	
gag atc ctg ccg ggg gac cca cca cgc cca ccc acg tgt ggg ttt	13380
Glu Ile Leu Pro Gly Asp Pro Pro Arg Pro Pro Thr Cys Gly Phe	
1280 1285 1290	
tta acg cgt taa acgtcattgg ggtagagggt gtaaataaat tacgaaaacg	13432
Leu Thr Arg	
1295	
tgcatgcggt ttttatTTTTT acaatgcgcc gtatatggta tgtctgtcat gtgctctaaa	13492
gtcccatata taaaagaagc cccaacgagt gtatgcgtat tgcgtaccgc gaccctggga	13552
tgTTTTtacag gcgcgTTTTgt ttgtctcggt tataagt atg cag tcg ggt cat tat	13607
Met Gln Ser Gly His Tyr	
1300	

aac	cgg	agg	caa	tcc	cgc	cga	cag	cgg	ata	tcg	tct	aat	acc	aca	13652
Asn	Arg	Arg	Gln	Ser	Arg	Arg	Gln	Arg	Ile	Ser	Ser	Asn	Thr	Thr	
		1305					1310					1315			
gac	tcc	ccc	cgt	cac	aca	cac	gga	aca	cgt	tat	cgg	tca	acc	aat	13697
Asp	Ser	Pro	Arg	His	Thr	His	Gly	Thr	Arg	Tyr	Arg	Ser	Thr	Asn	
		1320					1325					1330			
tgg	tat	aca	cac	cca	ccc	cag	ata	ttg	tcc	aat	tca	gaa	aca	tta	13742
Trp	Tyr	Thr	His	Pro	Pro	Gln	Ile	Leu	Ser	Asn	Ser	Glu	Thr	Leu	
		1335					1340					1345			
gtt	gcg	gtt	caa	gaa	cta	ctg	aac	tcc	gag	atg	gat	cag	gac	agc	13787
Val	Ala	Val	Gln	Glu	Leu	Leu	Asn	Ser	Glu	Met	Asp	Gln	Asp	Ser	
		1350					1355					1360			
agt	tct	gac	gca	tcg	gat	gat	ttt	ccg	gga	tac	gcc	tta	cat	cat	13832
Ser	Ser	Asp	Ala	Ser	Asp	Asp	Phe	Pro	Gly	Tyr	Ala	Leu	His	His	
		1365					1370					1375			
tct	aca	tat	aat	gga	tcc	gaa	caa	aat	aca	tca	act	tcc	aga	cat	13877
Ser	Thr	Tyr	Asn	Gly	Ser	Glu	Gln	Asn	Thr	Ser	Thr	Ser	Arg	His	
		1380					1385					1390			
gaa	aat	cgc	ata	ttt	aaa	tta	acg	gag	agg	gaa	gct	aat	gag	gaa	13922
Glu	Asn	Arg	Ile	Phe	Lys	Leu	Thr	Glu	Arg	Glu	Ala	Asn	Glu	Glu	
		1395					1400					1405			
atc	aac	atc	aat	acg	gac	gcg	atc	gac	gac	gag	gga	gag	gcg	gag	13967
Ile	Asn	Ile	Asn	Thr	Asp	Ala	Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	
		1410					1415					1420			
gag	gga	gag	gcg	gag	gag	gac	gcg	atc	gac	gac	gag	gga	gag	gcg	14012
Glu	Gly	Glu	Ala	Glu	Glu	Asp	Ala	Ile	Asp	Asp	Glu	Gly	Glu	Ala	
		1425					1430					1435			
gag	gag	gga	gag	gcg	gag	gag	gac	gcg	att	gac	gac	gag	gga	gag	14057
Glu	Glu	Gly	Glu	Ala	Glu	Glu	Asp	Ala	Ile	Asp	Asp	Glu	Gly	Glu	
		1440					1445					1450			
gcg	gag	gag	gga	gag	gcg	gag	gag	gac	gcg	att	gac	gac	gag	gga	14102
Ala	Glu	Glu	Gly	Glu	Ala	Glu	Glu	Asp	Ala	Ile	Asp	Asp	Glu	Gly	
		1455					1460					1465			
gag	gcg	gag	gag	gga	gag	gcg	gag	gag	gga	gag	gcg	gag	gag	gga	14147
Glu	Ala	Glu	Glu	Gly	Glu	Ala	Glu	Glu	Gly	Glu	Ala	Glu	Glu	Gly	
		1470					1475					1480			
gag	gcg	gag	gag	gac	gcg	atc	gac	gac	gag	gga	gag	gcg	gag	gag	14192
Glu	Ala	Glu	Glu	Asp	Ala	Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	Glu	
		1485					1490					1495			
gac	gcg	gcg	gag	gag	gac	gcg	atc	gac	gac	gag	gga	gag	gcg	gag	14237
Asp	Ala	Ala	Glu	Glu	Asp	Ala	Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	
		1500					1505					1510			
gag	gat	tat	ttt	tct	gta	agt	caa	gtt	tgc	agt	cga	gac	gcg	gat	14282
Glu	Asp	Tyr	Phe	Ser	Val	Ser	Gln	Val	Cys	Ser	Arg	Asp	Ala	Asp	
		1515					1520					1525			

gag gtt tat	ttt acg tta gac	ccg gaa ata agt	tac agt acc gat	14327
Glu Val Tyr	Phe Thr Leu Asp	Pro Glu Ile Ser	Tyr Ser Thr Asp	
1530	1535	1540		
ctt cgc att	gca aag gtt atg	gag cct gcg gta	tca aag gaa ctt	14372
Leu Arg Ile	Ala Lys Val Met	Glu Pro Ala Val	Ser Lys Glu Leu	
1545	1550	1555		
aat gta tca	aaa cgt tgt gtt	gaa cct gtt acc	cta aca ggc tct	14417
Asn Val Ser	Lys Arg Cys Val	Glu Pro Val Thr	Leu Thr Gly Ser	
1560	1565	1570		
atg tta gcg	cat aat ggg ttt	gat gag tcc tgg	ttt gct atg cgc	14462
Met Leu Ala	His Asn Gly Phe	Asp Glu Ser Trp	Phe Ala Met Arg	
1575	1580	1585		
gaa tgt acc	cgt cgc gaa tat	att acg gtc caa	gga tta tac gac	14507
Glu Cys Thr	Arg Arg Glu Tyr	Ile Thr Val Gln	Gly Leu Tyr Asp	
1590	1595	1600		
cca att cat	tta cgg tat cag	ttt gat act tcc	cgg atg aca ccc	14552
Pro Ile His	Leu Arg Tyr Gln	Phe Asp Thr Ser	Arg Met Thr Pro	
1605	1610	1615		
cca cag att	ttg aga act ata	cca gcc ctt cct	aac atg aca ctt	14597
Pro Gln Ile	Leu Arg Thr Ile	Pro Ala Leu Pro	Asn Met Thr Leu	
1620	1625	1630		
ggg gaa ctt	tta ttg att ttt	cct att gaa ttt	atg gcc cag cca	14642
Gly Glu Leu	Leu Leu Ile Phe	Pro Ile Glu Phe	Met Ala Gln Pro	
1635	1640	1645		
att tct ata	gaa cgt att tta	gtt gaa gat gta	ttt tta gat agg	14687
Ile Ser Ile	Glu Arg Ile Leu	Val Glu Asp Val	Phe Leu Asp Arg	
1650	1655	1660		
cgg gct tcc	agt aaa aca cat	aaa tac ggc ccg	cgt tgg aat tcc	14732
Arg Ala Ser	Ser Lys Thr His	Lys Tyr Gly Pro	Arg Trp Asn Ser	
1665	1670	1675		
gtc tac gca	ctt cca tat aat	gcg ggt aaa atg	tat gta caa cac	14777
Val Tyr Ala	Leu Pro Tyr Asn	Ala Gly Lys Met	Tyr Val Gln His	
1680	1685	1690		
att cct ggg	ttt tat gac gtg	tcc tta cgt gct	gtg ggc caa gga	14822
Ile Pro Gly	Phe Tyr Asp Val	Ser Leu Arg Ala	Val Gly Gln Gly	
1695	1700	1705		
acg gcc att	tgg cat cac atg	ata tta tcc aca	gca gca tgc gct	14867
Thr Ala Ile	Trp His His Met	Ile Leu Ser Thr	Ala Ala Cys Ala	
1710	1715	1720		
att tct aat	cgc att tca cat	gga gat gga tta	gga ttt ttg tta	14912
Ile Ser Asn	Arg Ile Ser His	Gly Asp Gly Leu	Gly Phe Leu Leu	
1725	1730	1735		
gac gcg gca	att cgt att agc	gca aac tgt att	ttt ttg gga cgt	14957
Asp Ala Ala	Ile Arg Ile Ser	Ala Asn Cys Ile	Phe Leu Gly Arg	
1740	1745	1750		

aac gat aat	ttt ggc gtg ggg gat	cca tgt tgg tta gaa gac cat	15002
Asn Asp Asn	Phe Gly Val Gly Asp	Pro Cys Trp Leu Glu Asp His	
1755	1760	1765	
ctt gcc gga	tta cca cga gaa gcc	gta ccc gac gta ctc caa gtg	15047
Leu Ala Gly	Leu Pro Arg Glu Ala	Val Pro Asp Val Leu Gln Val	
1770	1775	1780	
aca cag ttg	gtt ttg cca aat cgg	ggg cca acg gtt gcc att atg	15092
Thr Gln Leu	Val Leu Pro Asn Arg	Gly Pro Thr Val Ala Ile Met	
1785	1790	1795	
cgt ggt ttt	ttt ggg gcg ttg gca	tat tgg ccc gaa cta aga att	15137
Arg Gly Phe	Phe Gly Ala Leu Ala	Tyr Trp Pro Glu Leu Arg Ile	
1800	1805	1810	
gct ata agt	gaa cca tct aca tct	ttg gtg cga tat gct acc ggt	15182
Ala Ile Ser	Glu Pro Ser Thr Ser	Leu Val Arg Tyr Ala Thr Gly	
1815	1820	1825	
cac atg gaa	ctt gcc gaa tgg ttt	tta ttt tca cgt aca cat agt	15227
His Met Glu	Leu Ala Glu Trp Phe	Leu Phe Ser Arg Thr His Ser	
1830	1835	1840	
tta aag cca	caa ttt acc cca acg	gaa cgg gaa atg tta gcg tca	15272
Leu Lys Pro	Gln Phe Thr Pro Thr	Glu Arg Glu Met Leu Ala Ser	
1845	1850	1855	
ttt ttt acg	ttg tat gtt act ctt	ggg gga gga atg ttg aac tgg	15317
Phe Phe Thr	Leu Tyr Val Thr Leu	Gly Gly Gly Met Leu Asn Trp	
1860	1865	1870	
atc tgt aga	gca act gca atg tat	tta gct gct cct tac cat tcc	15362
Ile Cys Arg	Ala Thr Ala Met Tyr	Leu Ala Ala Pro Tyr His Ser	
1875	1880	1885	
cgt tcg gct	tac atc gcg gtc tgt	gaa tct ctg ccc tat tac tat	15407
Arg Ser Ala	Tyr Ile Ala Val Cys	Glu Ser Leu Pro Tyr Tyr Tyr	
1890	1895	1900	
atc ccg gtt	aat agt gac ctg tta	tgt gat tta gag gta tta ctg	15452
Ile Pro Val	Asn Ser Asp Leu Leu	Cys Asp Leu Glu Val Leu Leu	
1905	1910	1915	
tta ggc gag	gtc gac ctc cca act	gtt tgt gaa tcc tac gca act	15497
Leu Gly Glu	Val Asp Leu Pro Thr	Val Cys Glu Ser Tyr Ala Thr	
1920	1925	1930	
att gca cac	gaa tta acc gga tat	gag gct gtt cgc aca gca gcc	15542
Ile Ala His	Glu Leu Thr Gly Tyr	Glu Ala Val Arg Thr Ala Ala	
1935	1940	1945	
aca aat ttt	atg ata gag ttt gcc	gat tgt tat aag gaa agt gag	15587
Thr Asn Phe	Met Ile Glu Phe Ala	Asp Cys Tyr Lys Glu Ser Glu	
1950	1955	1960	
acc gat tta	atg gta agc gcg tac	ctg ggg gcc gtt tta ttg tta	15632
Thr Asp Leu	Met Val Ser Ala Tyr	Leu Gly Ala Val Leu Leu Leu	
1965	1970	1975	

caa cgg gtg	ttg ggt cat	gca aat	ctt ctt ttg	ttg ctt	ctc tcc	15677
Gln Arg Val	Leu Gly His	Ala Asn	Leu Leu Leu	Leu Leu	Leu Ser	
1980		1985		1990		
ggt gct gcg	ttg tac gga	gga tgt	tca att tac	atc ccc	cga ggt	15722
Gly Ala Ala	Leu Tyr Gly	Gly Cys	Ser Ile Tyr	Ile Pro	Arg Gly	
1995		2000		2005		
att tta gat	gca tat aat	act tta	atg ttg gca	gca agt	cct ctt	15767
Ile Leu Asp	Ala Tyr Asn	Thr Leu	Met Leu Ala	Ala Ser	Pro Leu	
2010		2015		2020		
tac gct cac	caa act tta	aca tcc	ttt tgg aaa	gac cgc	gat gat	15812
Tyr Ala His	Gln Thr Leu	Thr Ser	Phe Trp Lys	Asp Arg	Asp Asp	
2025		2030		2035		
gca atg caa	act ttg ggg	att cga	ccg aca acg	gac gtt	tta ccc	15857
Ala Met Gln	Thr Leu Gly	Ile Arg	Pro Thr Thr	Asp Val	Leu Pro	
2040		2045		2050		
aaa gag caa	gac agg ata	gtt cag	gca tca cct	ata gag	atg aac	15902
Lys Glu Gln	Asp Arg Ile	Val Gln	Ala Ser Pro	Ile Glu	Met Asn	
2055		2060		2065		
ttc cgt ttt	gtg gga ttg	gag acc	atc tat ccc	cga gaa	cag ccc	15947
Phe Arg Phe	Val Gly Leu	Glu Thr	Ile Tyr Pro	Arg Glu	Gln Pro	
2070		2075		2080		
att ccc tcc	gtg gac cta	gcc gaa	aat ctt atg	caa tac	agg aat	15992
Ile Pro Ser	Val Asp Leu	Ala Glu	Asn Leu Met	Gln Tyr	Arg Asn	
2085		2090		2095		
gaa att ctg	ggt ttg gat	tgg aaa	agc gta gcc	atg cat	tta cta	16037
Glu Ile Leu	Gly Leu Asp	Trp Lys	Ser Val Ala	Met His	Leu Leu	
2100		2105		2110		
cga aaa tat	ttaa ggg	ttgtgat	ttttttcatt	aggatgaaaa	gaacgtttcc	16089
Arg Lys Tyr						
2115						
tagccacacc	cacaaaggag	tttgtaaaat	aaaatctctg	tttagacctt	aaaatttggt	16149
gtgtgtgttg	tgtgggggggt	ccgtgaggat	cgacctttac	aagatataat	ttgtccatat	16209
cgca atg ttt	tct cgg ttt	gcg cgt tcc	ttt tcc	agc gat	gat aga	16255
Met Phe Ser	Arg Phe	Ala Arg Ser	Phe Ser	Ser Asp	Asp Arg	
	2120		2125			
acg cgt aaa	tct tat gat	ggt agt tac	caa agt	ttt aat	gcc ggc	16300
Thr Arg Lys	Ser Tyr Asp	Gly Ser Tyr	Gln Ser	Phe Asn	Ala Gly	
2130		2135		2140		
gaa cgt gat	ttg ccc aca	cct acc cgg	gac tgg	tgt tct	att tcc	16345
Glu Arg Asp	Leu Pro Thr	Pro Thr Arg	Asp Trp	Cys Ser	Ile Ser	
2145		2150		2155		
caa cgc ata	acc agc gag	cgc gtg agg	gat gga	tgt ctt	att cca	16390
Gln Arg Ile	Thr Ser Glu	Arg Val Arg	Asp Gly	Cys Leu	Ile Pro	
2160		2165		2170		

acg Thr 2175	ccc Pro	ggc Gly	gag Glu	gct Ala	ttg Leu 2180	gag Glu	acg Thr	gcg Ala	gta Val	aag Lys 2185	gct Ala	tta Leu	tct Ser	gaa Glu	16435
aag Lys 2190	acc Thr	gac Asp	agc Ser	cta Leu	aca Thr 2195	tcg Ser	ccg Pro	gtt Val	tta Leu	caa Gln 2200	agt Ser	acc Thr	gaa Glu	aga Arg	16480
cac His 2205	agt Ser	gtt Val	ctg Leu	ctt Leu	gga Gly 2210	tta Leu	cac His	cat His	aat Asn	aat Asn 2215	gtt Val	cct Pro	gaa Glu	tcg Ser	16525
ttg Leu 2220	gtg Val	gtc Val	tcg Ser	tgt Cys	atg Met 2225	tct Ser	aac Asn	gat Asp	gtt Val	cat His 2230	gac Asp	ggg Gly	ttt Phe	atg Met	16570
cag Gln 2235	cgt Arg	tat Tyr	atg Met	gaa Glu	aca Thr 2240	att Ile	caa Gln	aga Arg	tgt Cys	ttg Leu 2245	gat Asp	gac Asp	ctg Leu	aaa Lys	16615
ctt Leu 2250	tct Ser	ggg Gly	gat Asp	gga Gly	ctt Leu 2255	tgg Trp	tgg Trp	gtt Val	tat Tyr	gaa Glu 2260	aat Asn	aca Thr	tat Tyr	tgg Trp	16660
cag Gln 2265	tat Tyr	ctc Leu	aaa Lys	tac Tyr	acc Thr 2270	aca Thr	gga Gly	gcc Ala	gag Glu	gta Val 2275	ccg Pro	gtg Val	act Thr	tca Ser	16705
gag Glu 2280	aag Lys	gta Val	aat Asn	aaa Lys	aag Lys 2285	tct Ser	aaa Lys	tcc Ser	acg Thr	gtt Val 2290	ttg Leu	ttg Leu	ttt Phe	tca Ser	16750
tcc Ser 2295	gta Val	gtt Val	gcc Ala	aat Asn	aaa Lys 2300	cca Pro	ata Ile	tcc Ser	aga Arg	cat His 2305	cct Pro	ttt Phe	aaa Lys	tct Ser	16795
aaa Lys 2310	gtt Val	ata Ile	aat Asn	tcg Ser	gat Asp 2315	tac Tyr	cgg Arg	gga Gly	ata Ile	tgt Cys 2320	cag Gln	gag Glu	cta Leu	cgt Arg	16840
gag Glu 2325	gcg Ala	tta Leu	gga Gly	gct Ala	gtg Val 2330	caa Gln	aag Lys	tat Tyr	atg Met	tat Tyr 2335	ttt Phe	atg Met	cgt Arg	cca Pro	16885
gat Asp 2340	gat Asp	cct Pro	aca Thr	aac Asn	ccc Pro 2345	agc Ser	ccg Pro	gat Asp	aca Thr	aga Arg 2350	ata Ile	cgt Arg	gta Val	caa Gln	16930
gaa Glu 2355	att Ile	gcg Ala	gct Ala	tac Tyr	acg Thr 2360	gct Ala	act Thr	ggc Gly	tac Tyr	ggg Gly 2365	tgg Trp	atg Met	tta Leu	tgg Trp	16975
ttc Phe 2370	ttg Leu	gac Asp	gtt Val	gtg Val	gac Asp 2375	gcc Ala	agg Arg	gta Val	tgt Cys	cgc Arg 2380	cat His	ctc Leu	aaa Lys	ctt Leu	17020
caa Gln 2385	ttt Phe	cga Arg	cgg Arg	att Ile	cga Arg 2390	ggg Gly	ccg Pro	cgc Arg	gcg Ala	tct Ser 2395	gtt Val	att Ile	cca Pro	gat Asp	17065

gat Asp 2400	ttg Leu	ctt Leu	aga Arg	cga Arg	cat His 2405	tta Leu	aaa Lys	acg Thr	ggg Gly	cct Pro 2410	gcg Ala	gtc Val	tca Ser	gcg Ala	17110
ggc Gly 2415	aca Thr	gga Gly	gtt Val	gcg Ala	ttt Phe 2420	att Ile	tta Leu	gca Ala	gca Ala	aca Thr 2425	act Thr	gcc Ala	agc Ser	gct Ala	17155
ctt Leu 2430	act Thr	gcg Ala	ctt Leu	ttg Leu	cgt Arg 2435	att Ile	agt Ser	gta Val	tta Leu	tgg Trp 2440	cga Arg	aag Lys	gaa Glu	gag Glu	17200
tgg Trp 2445	cgg Arg	gat Asp	ggg Gly	tta Leu	aat Asn 2450	gga Gly	acc Thr	gca Ala	gct Ala	gca Ala 2455	att Ile	gtt Val	gcg Ala	gcg Ala	17245
gtt Val 2460	gaa Glu	ctt Leu	att Ile	acg Thr	ctt Leu 2465	ttg Leu	cac His	cac His	cat His	ttt Phe 2470	caa Gln	tac Tyr	tta Leu	att Ile	17290
aat Asn 2475	atg Met	atg Met	ctt Leu	att Ile	gga Gly 2480	tat Tyr	gca Ala	tgt Cys	tgg Trp	ggg Gly 2485	gat Asp	ggg Gly	gga Gly	tta Leu	17335
aac Asn 2490	gat Asp	cct Pro	tat Tyr	ata Ile	tta Leu 2495	aag Lys	gcg Ala	cta Leu	cgt Arg	gcc Ala 2500	cag Gln	gga Gly	cgg Arg	ttt Phe	17380
tta Leu 2505	tat Tyr	ttt Phe	gcg Ala	ggg Gly	cag Gln 2510	ttg Leu	gtc Val	aga Arg	aca Thr	atg Met 2515	tca Ser	aca Thr	cac His	agt Ser	17425
tgg Trp 2520	gtt Val	gtg Val	tta Leu	gag Glu	acc Thr 2525	agc Ser	acc Thr	cat His	atg Met	tgg Trp 2530	ttt Phe	tcc Ser	cgg Arg	gcc Ala	17470
gtg Val 2535	gcg Ala	cag Gln	agt Ser	att Ile	tta Leu 2540	gca Ala	cat His	ggg Gly	ggg Gly	aaa Lys 2545	ccc Pro	aca Thr	aag Lys	tat Tyr	17515
tat Tyr 2550	gct Ala	cag Gln	gtt Val	ctt Leu	gcc Ala 2555	gcc Ala	agt Ser	aaa Lys	cgg Arg	tat Tyr 2560	act Thr	ccg Pro	tta Leu	cat His	17560
tta Leu 2565	aga Arg	cgt Arg	ata Ile	tcc Ser	gaa Glu 2570	cca Pro	tcg Ser	agt Ser	gtg Val	tct Ser 2575	gat Asp	cag Gln	ccg Pro	tat Tyr	17605
att Ile 2580	cgt Arg	ttt Phe	aat Asn	cga Arg	ctg Leu 2585	gga Gly	tct Ser	cca Pro	ata Ile	ggg Gly 2590	aca Thr	ggg Gly	ata Ile	ggg Gly	17650
aat Asn 2595	ttg Leu	gaa Glu	tgt Cys	gtc Val	tgt Cys 2600	tta Leu	acg Thr	gga Gly	aat Asn	tat Tyr 2605	tta Leu	tct Ser	gac Asp	gac Asp	17695
gta Val 2610	aat Asn	gca Ala	agt Ser	tcg Ser	cat His 2615	gta Val	att Ile	aat Asn	aca Thr	gaa Glu 2620	gca Ala	ccg Pro	tta Leu	aac Asn	17740

agt Ser 2625	ata Ile 2625	gca Ala 2625	ccc Pro 2625	gat Asp 2625	aca Thr 2630	aat Asn 2630	aga Arg 2630	cag Gln 2630	cgg Arg 2635	act Thr 2635	tct Ser 2635	cgc Arg 2635	ggt Val 2635	tta Leu 2635	17785
ggt Val 2640	cgt Arg 2640	cca Pro 2640	gac Asp 2640	acg Thr 2645	ggg Gly 2645	ttg Leu 2645	gat Asp 2645	gta Val 2645	act Thr 2650	gtc Val 2650	cga Arg 2650	aaa Lys 2650	aac Asn 2650	cac His 2650	17830
tgt Cys 2655	ctg Leu 2655	gac Asp 2655	ata Ile 2655	ggc Gly 2660	cat His 2660	acg Thr 2660	gac Asp 2660	ggg Gly 2660	agt Ser 2665	cca Pro 2665	ggt Val 2665	gac Asp 2665	cca Pro 2665	acg Thr 2665	17875
tat Tyr 2670	cct Pro 2670	gat Asp 2670	cat His 2670	tac Tyr 2675	acc Thr 2675	cgg Arg 2675	ata Ile 2675	aag Lys 2675	gcg Ala 2680	gaa Glu 2680	tat Tyr 2680	gaa Glu 2680	ggg Gly 2680	ccg Pro 2680	17920
ggt Val 2685	cgg Arg 2685	gat Asp 2685	gaa Glu 2685	tca Ser 2690	aac Asn 2690	aca Thr 2690	atg Met 2690	ttt Phe 2690	gac Asp 2695	caa Gln 2695	aga Arg 2695	tcg Ser 2695	gat Asp 2695	tta Leu 2695	17965
cgt Arg 2700	cac His 2700	ata Ile 2700	gaa Glu 2700	acc Thr 2705	caa Gln 2705	gca Ala 2705	tct Ser 2705	tta Leu 2705	aat Asn 2710	gat Asp 2710	cac His 2710	gta Val 2710	tat Tyr 2710	gaa Glu 2710	18010
aat Asn 2715	ata Ile 2715	cca Pro 2715	ccc Pro 2715	aag Lys 2720	gaa Glu 2720	gtg Val 2720	ggg Gly 2720	ttt Phe 2720	aac Asn 2725	tca Ser 2725	tct Ser 2725	tca Ser 2725	gac Asp 2725	ctg Leu 2725	18055
gat Asp 2730	gtg Val 2730	gat Asp 2730	agc Ser 2730	ctt Leu 2735	aac Asn 2735	ggg Gly 2735	tac Tyr 2735	acc Thr 2735	tcc Ser 2740	gga Gly 2740	gac Asp 2740	atg Met 2740	cat His 2740	aca Thr 2740	18100
gac Asp 2745	gat Asp 2745	gac Asp 2745	tta Leu 2745	tca Ser 2750	cca Pro 2750	gat Asp 2750	ttt Phe 2750	ata Ile 2750	ccc Pro 2755	aac Asn 2755	gac Asp 2755	ggt Val 2755	ccc Pro 2755	ggt Val 2755	18145
aga Arg 2760	tgt Cys 2760	aaa Lys 2760	acc Thr 2760	acg Thr 2765	ggt Val 2765	acg Thr 2765	ttt Phe 2765	agg Arg 2765	aaa Lys 2770	aat Asn 2770	acg Thr 2770	cct Pro 2770	aag Lys 2770	agt Ser 2770	18190
cat His 2775	cat His 2775	taa His 2775	gtacagcggg	taatagatag	ttatggacta	ggcactttgg									18239
cggtcatttc	cacaaccagg	ttaaaattgg	gggatttggg	agaaaatagt	ctattgcgta										18299
ttttctgttc	aataattgga	ctgcgttatt	ttaaagggtctg	attgggttgat	tgggttataa										18359
aaggaattac	tccttttaa	tttactta	gtacccacaa	tatcaagtgg	tcgtttgtat										18419
ttaacgatta	ttaccggtac	c	atg	gga	gac	ttg	tca	tgt	tgg	aca	aag	gtg			18470
			Met	Gly	Asp	Leu	Ser	Cys	Trp	Thr	Lys	Val			
						2780									2785
ccg	ggg	ttt	acg	tta	acc	ggc	gaa	ctt	cag	tac	tta	aaa	caa	gtg	18515
Pro	Gly	Phe	Thr	Leu	Thr	Gly	Glu	Leu	Gln	Tyr	Leu	Lys	Gln	Val	
			2790												2795
															2800
gat	gat	att	tta	agg	tat	gga	ggt	cgg	aaa	cgc	gat	cga	aca	gga	18560
Asp	Asp	Ile	Leu	Arg	Tyr	Gly	Val	Arg	Lys	Arg	Asp	Arg	Thr	Gly	

2805				2810				2815				
atc gga acg tta	tct tta ttt gga atg	caa gct cga tac	aat ttg	18605								
Ile Gly Thr Leu	Ser Leu Phe Gly Met	Gln Ala Arg Tyr	Asn Leu									
2820	2825	2830										
cga aat gaa ttt	cct ctt tta act aca	aag cgt gtt ttt	tgg agg	18650								
Arg Asn Glu Phe	Pro Leu Leu Thr Thr	Lys Arg Val Phe	Trp Arg									
2835	2840	2845										
gcc gtc gtg gaa	gag ttg tta tgg ttt	atc cgc ggg tca	acc gat	18695								
Ala Val Val Glu	Glu Leu Leu Trp Phe	Ile Arg Gly Ser	Thr Asp									
2850	2855	2860										
tcc aaa gaa ctc	gcc gct aaa gat ata	cac ata tgg gat	ata tac	18740								
Ser Lys Glu Leu	Ala Ala Lys Asp Ile	His Ile Trp Asp	Ile Tyr									
2865	2870	2875										
gga tcg agc aaa	ttt cta aat agg aat	ggc ttc cat aaa	aga cac	18785								
Gly Ser Ser Lys	Phe Leu Asn Arg Asn	Gly Phe His Lys	Arg His									
2880	2885	2890										
acg ggg gac ctt	ggc ccc att tac ggc	ttc cag tgg aga	cat ttt	18830								
Thr Gly Asp Leu	Gly Pro Ile Tyr Gly	Phe Gln Trp Arg	His Phe									
2895	2900	2905										
gga gcg gaa tat	aaa gac tgt caa tca	aac tat tta cag	caa gga	18875								
Gly Ala Glu Tyr	Lys Asp Cys Gln Ser	Asn Tyr Leu Gln	Gln Gly									
2910	2915	2920										
atc gat cag ctg	caa act gtt ata gat	aca att aaa aca	aac cca	18920								
Ile Asp Gln Leu	Gln Thr Val Ile Asp	Thr Ile Lys Thr	Asn Pro									
2925	2930	2935										
gaa agc cga cga	atg att ata tcg tct	tgg aat cca aag	gat atc	18965								
Glu Ser Arg Arg	Met Ile Ile Ser Ser	Trp Asn Pro Lys	Asp Ile									
2940	2945	2950										
ccc tta atg gta	cta cct cca tgt cac	acg tta tgt cag	ttt tac	19010								
Pro Leu Met Val	Leu Pro Pro Cys His	Thr Leu Cys Gln	Phe Tyr									
2955	2960	2965										
gtt gca aac ggt	gaa tta tcc tgc caa	gta tac cag aga	tcg ggg	19055								
Val Ala Asn Gly	Glu Leu Ser Cys Gln	Val Tyr Gln Arg	Ser Gly									
2970	2975	2980										
gat atg ggc ctt	ggg gta ccg ttc aac	att gct gga tat	gca ctt	19100								
Asp Met Gly Leu	Gly Val Pro Phe Asn	Ile Ala Gly Tyr	Ala Leu									
2985	2990	2995										
ctt acc tac ata	gta gcg cat gtt aca	gga ctt aaa acc	gga gat	19145								
Leu Thr Tyr Ile	Val Ala His Val Thr	Gly Leu Lys Thr	Gly Asp									
3000	3005	3010										
tta att cat aca	atg ggg gat gca cat	att tac ttg aat	cat ata	19190								
Leu Ile His Thr	Met Gly Asp Ala His	Ile Tyr Leu Asn	His Ile									
3015	3020	3025										
gat gct tta aaa	gtg cag cta gct cga	tcc cca aaa cct	ttt cct	19235								
Asp Ala Leu Lys	Val Gln Leu Ala Arg	Ser Pro Lys Pro	Phe Pro									

3030	3035	3040	
tgc ctt aaa att att cga aat gta aca gat ata aac gac ttt aaa			19280
Cys Leu Lys Ile Ile Arg Asn Val Thr Asp Ile Asn Asp Phe Lys			
3045	3050	3055	
tgg gac gat ttt cag ctt gat gga tat aat cca cac ccc ccc cta			19325
Trp Asp Asp Phe Gln Leu Asp Gly Tyr Asn Pro His Pro Pro Leu			
3060	3065	3070	
aaa atg gaa atg gct ctt taa tggattttta aatgttgtca agacagtaga			19376
Lys Met Glu Met Ala Leu			
3075			
tgtgttgoga atgtaataaa atgatataca cagacgcggt tggttggttt ctgtttatga			19436
acagcaacgg atgcataggg ttgcgataac tgcgataaga cccaatgtcc caaggataga			19496
tatcacacca attataactg ctacaacgga aaatgtagtg gcgtaggtag atgcatcgta			19556
ggtataaacg gccgaaaacg gaggggaattt tttagggtaa ccatctagat gacacgaata			19616
ggtgataggt ccgtcgagtt ccgatggttg acaagaactt tgcattgtta caaacggtt			19676
gttttgatca cacaccccag taatctcact gttttcgtgg ttaatgggag aatcgttaac			19736
ccaccatacg aaatgtacaa cgccacgtgg cacacatttt gccgtacata ctatgtgtcc			19796
atcaataata cctatagaca cgttgggaaa tggatagacg tcaggggtaa cgacagcaga			19856
atatttcata ttagagacgc catcccgaat ccataaaaca ttacattgga tggctggggg			19916
tgggtaatcc atttgttttt gctgtggaat tcgtaccgcc gaaacataac taaataatcc			19976
attggcatat tcttgatttg catcggttat aaaatttttt ccgatgttac caaaccttga			20036
agtcaccga acacgtaccg agtgcggtgg ataatacttt gataggttac agtaggctgc			20096
gtatgtctgt ccggttaaga ctggatcgcc gacaacggta atatttgga gataatacgt			20156
tgtaactgta atactgtgtt ccgatatgac gttcttagtt tttgtattaa cgactcgcca			20216
aatatacgtt ccctccgtgg tagcatccat agataaaatt gttacagaaa aatcagacgt			20276
tgttttaaca tctgggtatta cataattttt cttagcgtgt gtaaataatct cagggttgtt			20336
tattaagttt aaatcggcac tgttgctata taacataacc ggtaaactctg gcatgcgtat			20396
taacgcattg ccagttgac ggtgcggatc tataaggtga cgcgtaaacc aaacttcaat			20456
atgaagatcg gggcgtataa gcgacttcca ccttggtata tttgaacctt ccgatctaa			20516
agaatattgt tcatatgttt tttgttgctg cttaaaggcc gcctgttgct cggtcgtag			20576
acgcatgtaa caaggcatga taaatgtgtg aaaatagggg atggattgta ttccgccgtg			20636
aacgcattgt atattttcat atagaaaagg tggttgtgaa tggtgggtgt tggctgcggg			20696
atcgggcttt cggaagcgg ccgaggtggg cgcgacggcg ggatcgggct ttcgggtagc			20756

ggccgaggtg	ggcgcgacgg	cgggatcggg	ctttcgggaa	gcggccgagg	tgggcgcgac	20816
ggcgggatcg	ggctttcggg	tagcggccga	ggtgggcgcg	acggcgggat	cgggctttcg	20876
ggaagcggcc	gaggtgggcg	cgacggcggg	atcgggcttt	cgggaagcgg	ccgaggtggg	20936
cgcgacggcg	ggatcgggct	ttcgggaagc	ggccgaggtg	ggcgcgacgg	cgggatcggg	20996
ctttcgggta	gcggccgagg	tatataattc	agttatactt	acgggtgtgg	gttgagattc	21056
agtcgataat	tgtatacacg	cgatcggtta	aattaaattt	atttgtatcc	gcttcatact	21116
ggtttttatt	gacacatcca	cgctccccct	aaataaaaga	ttaaaacacc	caccgcggaa	21176
tttaaatgat	ggaaacgttt	ttttcgacat	tgggaataat	aaaaacggct	tttgcaactt	21236
taaaaacttt	atttatctcg	attacgatac	atatgtacca	catagatagc	atagatttat	21296
tataatataa	acacacacgt	gatatacttt	agtgatatga	gatgccataa	aacagtcaat	21356
aggtttaacg	cttagtctca	tcattctgaat	acacgtcaaa	cccgccgcaa	ctgttgatgt	21416
tagaattata	atagctcccc	atgaaatgcc	ggcaaagtgt	acagctatac	ccgtcaccga	21476
ggtcgttgta	tataatacaa	ttacccatag	gttttttttt	tcttgatata	aaacggcaaa	21536
accctgtaac	ccaaatgcta	taatatgacc	tcctattgaa	actgctaacg	ttacttgtgt	21596
aagtttgata	aaatgattta	atttaattat	atgtgagatt	gccacatta	atggggtaac	21656
tatatataac	accgggggta	taacagacat	tatacgaatt	cctttaaaca	cgcgtttaag	21716
ggtcggggaa	ctttctcgat	ggtcacatac	tctcccgcgg	tcattttgtg	tatatacaac	21776
ggcaaaacct	aaatctgtat	aagtgtttta	ttgcttatgg	cgatttttac	gatataatac	21836
cgtatcttgc	aaatcggtgg	cggcatcgac	aattgaaact	agtgtgacaa	tagatataca	21896
caatccaata	agaacctcat	atttactgac	atacatatat	aaaataacgg	ttagtaaacc	21956
tcccaaccca	gttcccaaca	tcataacata	aaaataaata	tgcgggtccat	tgaatgtcgt	22016
aacaaagttg	tagtaatgga	tatgcacagc	agccactgtt	ccggtaatcg	cggatatgga	22076
aattcccagt	aattctacaa	atggaagatc	ccgggatatt	gggcaaccaa	ccgcccataa	22136
cacagcaaaa	ccaacacga	ccaccgtctg	caaacatcgt	ccaatttttg	ctaatgtgcg	22196
tagaaatttc	acggatgttg	gccataacct	cgaaacgacg	atcaacccca	taatagttgc	22256
attgacggca	gcttcgcaga	cgtgatattg	taaaattaac	ccggacgtga	taacgcttgc	22316
ttgtagtccc	acgagaaaca	accgcgatgc	tgaggttatt	gcacacgaat	tacattcttg	22376
agggtttccg	acacatcctt	ggattgattg	agcgcggatt	aattctctgt	ctaacacacc	22436
cagggttttca	tcattggacag	ctctttcacc	attcacggcc	atgtcttaag	tttaataatt	22496
caaaacaaat	aaaaatgtgt	tcattctatgg	tacacacaag	tttgatgtga	aaatataagc	22556

aaaagttgca cttattttaac tgtacatatt acgtcagatt cacgtgataa ttcagaataa	22616
tccaggggttc ctgcaggggtc cactggagga gccacacaat attcgcgaat tccgattccc	22676
tcctgccatg tggtttcggg gagtttcccc cccattttat ttccggtatt tttttcgttt	22736
ctttttgtta ataaattgcg tctttttttt aatgggtggt catccttcac agattccatg	22796
ttcgcaaata attgcatcga gggttaatttt tctttaaggt ctttgggact taagaacggt	22856
gcataaaaaa agaattgcac ggggtgcggaa cgttggatat acaatccaac catggggggag	22916
ttagttaagg cgagataaaa attaataata cacgtctcat cccgtgttaa ctttaagattt	22976
tgtacggcag aacggaatcc actgtgtgtt tccaataata ctccaaattc acgcatactc	23036
ccgctgccat aaacaacatt attaaggatc ctttttgaat ttgtgattga gcgtattaaa	23096
ttatatggtg taggcttgct tccgtttata tccaaggaaa cattaaatga gataaaacca	23156
cccccggcgg tctggatgta catatccgtg gctgttagaa tgaagcatgt tgtaaacca	23216
aaagttttta gtagtcgctg taaacgggtg aattgatcgc gttttaagca aatgcttata	23276
tctggagtta gatttggaac catcattgta taacaagcga gttcacgttt tacaacttgt	23336
ttgtaacatt gtacttgatc atctggacca caatcacccg ggcgttgcca taccatcgtt	23396
tggataatac tccgctcggg gggttgtccg gtaaatttaa aatataaccg tgttggggtc	23456
gacggatctt ttgtatggcg aaacgcgtca ataagcgagg accgtccctc cgttgccgcg	23516
agtacaacca ttctcggccc agtccaatta tactgggtcaa acatatttgc cggtatagga	23576
atatacagtt gttctgtttc caaactacag tgaataatta atccttcgtc gctgaatatt	23636
aaaatagaat cccttagtct attaaccaga ggtgatatag acgaaattaa accagtaagc	23696
gttttttccg ttaaaacagc tctggcgatt tctggggcgt caaaaccgc atgcaattcc	23756
atgtccaaag catcgtctgt acgcgacctc aaatccataa tttactactt aaaatgttta	23816
ctatagaaaa agtaatcata tgtaaacaca cgagtttcgt taatatgttt gtttaaccgc	23876
atccggtgac ttaagtacat aaacaggcat gatatttgaa tagtacggcc catgggaggg	23936
aacatttcca cgtgttccaa tacaggggggt gttccttaat agggactgtg caataaaata	23996
cgtaagaagt taccagattt gatgtaatgt ttgtcataaa aaatatgtac atcattatat	24056
acgtctgtaa ttaacacaag atcacatcga agaattactg aagccgctgt gaaacctttc	24116
acaagacgat ataaacttgg ttaagtgtat tg atg ggg ctc ttt gga ctg aca	24169
Met Gly Leu Phe Gly Leu Thr	
3080	
cgc ttt atc cat gaa cat aaa ctg gtt aaa ccc agc atc att tca	24214
Arg Phe Ile His Glu His Lys Leu Val Lys Pro Ser Ile Ile Ser	
3085 3090 3095	

acg Thr 3100	cca Pro	ccc Pro	gga Gly	gtt Val	tta Leu 3105	acc Thr	ccc Pro	gtg Val	gcg Ala	gta Val 3110	gac Asp	gta Val	tgg Trp	aac Asn	24259
gtc Val 3115	atg Met	tac Tyr	aca Thr	ttg Leu 3120	ttg Leu	gaa Glu	cgt Arg	tta Leu	tac Tyr	cct Pro 3125	gtg Val	ggg Gly	aaa Lys	cgc Arg	24304
gag Glu 3130	aat Asn	tta Leu	cac His	gga Gly 3135	cca Pro	tct Ser	gta Val	acg Thr	ata Ile	cat His 3140	tgt Cys	ctt Leu	gga Gly	gtc Val	24349
tta Leu 3145	ttg Leu	cgg Arg	cta Leu	tta Leu 3150	aca Thr	caa Gln	cgg Arg	tca Ser	tac Tyr	tat Tyr 3155	ccg Pro	ata Ile	ttt Phe	gta Val	24394
ttg Leu 3160	gaa Glu	cgt Arg	tgt Cys	aca Thr 3165	gac Asp	ggc Gly	cca Pro	tta Leu	tca Ser	cgt Arg 3170	gga Gly	gcc Ala	aag Lys	gca Ala	24439
att Ile 3175	atg Met	tca Ser	cgg Arg	gcc Ala 3180	atg Met	aac Asn	cac His	gat Asp	gaa Glu	agg Arg 3185	gga Gly	acc Thr	tcg Ser	gac Asp	24484
tta Leu 3190	acc Thr	cgt Arg	gtt Val	cta Leu 3195	cta Leu	tca Ser	tcc Ser	aac Asn	aca Thr	tca Ser 3200	tgt Cys	tct Ser	atc Ile	aag Lys	24529
tat Tyr 3205	aac Asn	aaa Lys	aca Thr	tcg Ser 3210	gaa Glu	aca Thr	tat Tyr	gac Asp	agt Ser	gtg Val 3215	ttt Phe	cga Arg	aac Asn	tct Ser	24574
tcc Ser 3220	acg Thr	agt Ser	tgt Cys	att Ile 3225	cct Pro	agc Ser	gaa Glu	gaa Glu	aac Asn	aaa Lys 3230	tcc Ser	cag Gln	gat Asp	atg Met	24619
ttt Phe 3235	ttg Leu	gac Asp	ggg Gly	tgt Cys 3240	cca Pro	cga Arg	caa Gln	act Thr	gac Asp	aag Lys 3245	acg Thr	atc Ile	tgc Cys	ctg Leu	24664
cgc Arg 3250	gac Asp	caa Gln	aac Asn	gta Val 3255	tgc Cys	agt Ser	ctt Leu	acc Thr	tct Ser	aca Thr 3260	atg Met	cca Pro	tcc Ser	cga Arg	24709
gga Gly 3265	cat His	cct Pro	aac Asn	cat His 3270	cga Arg	tta Leu	tat Tyr	cac His	aaa Lys	ttg Leu 3275	tgt Cys	gca Ala	agt Ser	ctt Leu	24754
att Ile 3280	aga Arg	tgg Trp	atg Met	ggg Gly 3285	tat Tyr	gca Ala	tac Tyr	gtc Val	gag Glu	gcg Ala 3290	gtt Val	gac Asp	att Ile	gag Glu	24799
gcg Ala 3295	gac Asp	gag Glu	gca Ala	tgt Cys 3300	gca Ala	aac Asn	tta Leu	ttt Phe	cat His	acg Thr 3305	cgt Arg	aca Thr	gtg Val	gct Ala	24844
ttg Leu 3310	gtt Val	tat Tyr	acg Thr	aca Thr 3315	gat Asp	act Thr	gat Asp	tta Leu	ctc Leu	ttc Phe 3320	atg Met	ggc Gly	tgt Cys	gat Asp	24889

att	ttg	tta	gat	gca	att	cct	atg	ttt	gct	cca	gta	gta	cga	tgt	24934
Ile	Leu	Leu	Asp	Ala	Ile	Pro	Met	Phe	Ala	Pro	Val	Val	Arg	Cys	
3325					3330					3335					
cgc	gat	ttg	ctt	caa	tat	tta	gga	att	aca	tac	cct	gaa	ttt	ttg	24979
Arg	Asp	Leu	Leu	Gln	Tyr	Leu	Gly	Ile	Thr	Tyr	Pro	Glu	Phe	Leu	
3340					3345					3350					
gtt	gcc	ttt	gtt	cgc	tgt	cag	acc	gat	ttg	cat	aca	agt	gac	aac	25024
Val	Ala	Phe	Val	Arg	Cys	Gln	Thr	Asp	Leu	His	Thr	Ser	Asp	Asn	
3355					3360					3365					
cta	aaa	tct	gtt	cag	caa	gtt	att	cag	gat	acc	ggc	ctg	aaa	gtt	25069
Leu	Lys	Ser	Val	Gln	Gln	Val	Ile	Gln	Asp	Thr	Gly	Leu	Lys	Val	
3370					3375					3380					
cca	cat	caa	atg	gac	act	tca	acg	cgc	tcc	ccc	act	tac	gac	tcg	25114
Pro	His	Gln	Met	Asp	Thr	Ser	Thr	Arg	Ser	Pro	Thr	Tyr	Asp	Ser	
3385					3390					3395					
tgg	aga	cat	ggc	gag	gtt	ttc	aaa	agt	ctt	acc	gta	gcc	acg	tcg	25159
Trp	Arg	His	Gly	Glu	Val	Phe	Lys	Ser	Leu	Thr	Val	Ala	Thr	Ser	
3400					3405					3410					
ggt	aaa	aca	gaa	aac	gga	gtg	tcc	gtt	tcc	aaa	tat	gca	tct	aac	25204
Gly	Lys	Thr	Glu	Asn	Gly	Val	Ser	Val	Ser	Lys	Tyr	Ala	Ser	Asn	
3415					3420					3425					
cga	tcg	gag	gtg	aca	gta	gac	gcc	agt	tgg	gct	tta	aac	ctt	ctg	25249
Arg	Ser	Glu	Val	Thr	Val	Asp	Ala	Ser	Trp	Ala	Leu	Asn	Leu	Leu	
3430					3435					3440					
cca	ccc	tca	tcc	tcc	cca	ttg	gat	aat	ttg	gaa	cgc	gca	ttt	gtt	25294
Pro	Pro	Ser	Ser	Ser	Pro	Leu	Asp	Asn	Leu	Glu	Arg	Ala	Phe	Val	
3445					3450					3455					
gaa	cat	ata	atc	gcc	gtg	gta	act	cca	ttg	acc	cgc	ggt	cgc	cta	25339
Glu	His	Ile	Ile	Ala	Val	Val	Thr	Pro	Leu	Thr	Arg	Gly	Arg	Leu	
3460					3465					3470					
aag	tta	atg	aaa	cgt	gta	aat	att	atg	caa	aat	acg	gca	gac	cca	25384
Lys	Leu	Met	Lys	Arg	Val	Asn	Ile	Met	Gln	Asn	Thr	Ala	Asp	Pro	
3475					3480					3485					
tat	atg	gtt	att	aac	acc	tta	tat	cat	aac	tta	aag	ggg	gaa	aaa	25429
Tyr	Met	Val	Ile	Asn	Thr	Leu	Tyr	His	Asn	Leu	Lys	Gly	Glu	Lys	
3490					3495					3500					
atg	gct	cgc	caa	tac	gca	cgt	att	ttt	aaa	cag	ttt	att	cct	act	25474
Met	Ala	Arg	Gln	Tyr	Ala	Arg	Ile	Phe	Lys	Gln	Phe	Ile	Pro	Thr	
3505					3510					3515					
cca	ctc	cca	cta	aac	act	gta	tta	aca	aaa	tat	tgg	aat	taa		25516
Pro	Leu	Pro	Leu	Asn	Thr	Val	Leu	Thr	Lys	Tyr	Trp	Asn			
3520					3525					3530					
aacacacata	agagcgcactt	aatgggttcat	tgtttttat	ttt	tgctcgtata	tacatgttat									25576
aaatcgttta	tcactgtgcc	cgcataagat	gtactgtgtc	tctcaaaaaa	atttgtgttt										25636

ttatctgcaa	tcataaatgc	aagtggaaag	tccgaatcgg	gaggtgggggt	gttaaatagt	25696
tttggtacat	taatcgctga	taaaagcctg	tccgcgctga	atttcacgta	ttgtgtaatt	25756
gcatcgacgt	tcaccaaacg	ggttttgggt	gcatgggatt	ttaaaaacgc	acactcgatt	25816
tcaacggctt	cggaaaacag	ttgatgtatt	ctgggtgatag	cgggtttttc	gggtacatag	25876
ttattgtata	tacaacacga	tgcgctggta	tgtatggctt	catctcggct	tataaggctc	25936
ttaaattgac	aagttacaac	aaatagtccg	ttattgcgta	aatatgcaat	agccgcgaac	25996
gatgatacaa	aaaaaatgcc	ctctataaga	atcattagta	tatatTTTTc	tgcaacggat	26056
gggttgtecc	gtaccttttc	ttccaaccat	tgtacttttt	gttggatcga	cggattatta	26116
atagtacat	ttacgtattg	tacccgcaac	gattcatccc	ctctgaacaa	cattagttga	26176
atgtgactat	agacacgcgc	gtggacaacc	tcgatgcact	cttgttcaat	gtagtaatgg	26236
tgaatatcct	tttgggaaaa	gagttgggtt	agagagccca	aattaacatt	taccagatca	26296
tctgccgccg	ataaaaatgt	aaaaataaat	ctgtagaata	ttagttcatc	ttccgttaaa	26356
cagtccaagt	attgataatc	atcttcaatg	ataaaatcgc	tttctaacca	acgattcgaa	26416
atgctcaggg	cacgtaaatt	gtttatatct	ggacactccg	gcctgtaaaa	aaaatgactg	26476
caatctttct	gatccatttt	ggaatagttt	cccgtgtaaa	tttataaagc	acaactggta	26536
caggtttaatt	cgctccccgc	aaacagtccg	ctgttcgtag	ctttacgaat	tttacagtag	26596
tacatacccg	ttttaaggcc	ggcttttatag	gcacgtataa	gcaaattcat	tattttggag	26656
gcgggaattg	tcccgtctgg	gcgttcctca	ataaataaag	tcattgattg	actttgggtca	26716
ataaatggcg	ccctttctgc	acacatatca	acgagatcct	cttgctcata	ttcaaacgct	26776
gttttatatt	ttaagagtgg	gtgactatta	gataaacagc	caaacgaacg	tattactgac	26836
cattggtttt	tctcaagtat	gtttataact	tccagtcggt	tttcttcaca	tgaatacata	26896
tctcttagtt	cgtccataag	gtctaagttg	ggtctaagta	actcaccgga	ggtggtgacc	26956
ttactaaaca	tattattata	aattggagag	aaaccctcac	tgcactccgt	tacctgtgca	27016
gatgaaactg	tgggcattaa	cgctaagaac	tgcgagttgt	ataaccata	agcgcaaata	27076
tcactctgca	gggtacacca	tggtaaatct	aaataactta	tcgtagaaaa	cccatcttgg	27136
tgtaaccatc	ccttagcata	tttactttcg	gtaaaaccct	taaacggggc	taagccgcca	27196
atcttacaca	tttccatgct	tgttttcatt	gtctcataca	acattaactc	cgctatttgt	27256
acatttaacc	gtctagctgg	ttgggaagtt	aaatcaaatc	ctaagcggag	acaagttgta	27316
tgtaaccctt	gtatgccaat	gccagtgat	cggttgtttt	ttacaccttt	acatgatttt	27376
ttacatggaa	agttcccagc	cgccaggacc	ccgtttaaaa	aaataacagt	cgttcttgct	27436

gtcaattgaa	ggtcggttta	attaaatgac	actgggcctt	tggataagca	cgttgtaaga	27496
tttatgctgg	caagattaca	tacgccatgt	tgatgagcgt	ctgccttttg	aacaatttcc	27556
gtacacaaat	ttgaccccg	gatagcattt	ccttgggtat	tcatatgata	attacgatta	27616
caggcatcct	tgaacattaa	aaaggggctt	cctgttacag	cagcactgcg	tatgattgtg	27676
aatgcgatat	cttgaatggg	aacagaagaa	acgcctaata	cttctctctc	taaacgtaaa	27736
taggttgaag	tgaatgcctc	cccgtgtaat	gttcgaagga	tatcggctct	gttatcaaaa	27796
agagtccact	gaacattact	agcccccttt	agatagctta	ggatatcttc	aaaaaataaa	27856
tctgggggtc	ataaacaaca	aatatgttta	tcacatcgaa	atatttcatc	acgaaccaac	27916
attccacgtg	tggccaaaac	agtttgtaga	tcgacgtgcc	atggttctat	gtaaacacaa	27976
actccagttg	gtcgttcaca	atcactgtta	attgccataa	ccatgcaata	taaaagtttt	28036
aaaactgcaa	gaagaccttt	cgtttgattt	tccgtaggta	ttaaattcag	actctgtaga	28096
gaaattccca	ctccacctcg	actttgtaat	accgttccca	catcgctgtg	gatagctcga	28156
acagctctcc	caacagtgat	ggattccggg	tccattaaat	aacaactggc	cgttgccccg	28216
gtctctcgac	ctaaaaacat	cataaccggt	gtagccggga	caattttctg	acatgccaac	28276
gctgtgaaaa	atacccgaca	gacatcagtc	catgtataac	catcatttat	tccgggaata	28336
agagttgcga	ttttaggcag	gtttacgatt	tctgttgtca	cggtggccgc	cagtcttaaa	28396
aagaattggc	aaagcgactc	taatttacct	tcctctaact	tagttaaata	aaagtcttcg	28456
tactttaaag	cagactgtag	tccaagggtg	gctaaagcgg	ggatttgatc	tttcaaaaac	28516
ggttctaata	tagcccgacg	aatttcgtcc	ctccgccctt	caattgcttg	gcggactcgg	28576
ggagttaaac	agagaattgg	ggaagtcaac	cacgtttcca	tggaaacgga	tcgtagggtta	28636
atacggcaat	ggataagttc	tccacaacat	cggtacactc	gctcatcttg	tcgcgtcacc	28696
gccttaagtt	ttgagacgat	agtgctaata	tactccatta	attccaccgg	tgtggttgat	28756
tcgggcggaa	tgatgtattc	cttgtagcca	tgttgacata	atcggtttat	aatgtcatga	28816
accgtattaa	aaattctttt	gaactccata	acggataacg	tatttaggct	ccggaataaa	28876
cctttaaacc	ctaaactcac	agctgagtta	gttctacaat	attgtagact	cccttatata	28936
tggttacgta	cagcctgccc	ctccccagta	tataatatca	cgcaaaaccc	acgctatggt	28996
aaattcagtt	tattttacat	acatgcttta	ataataacat	tcgttccatg	tatttgtacc	29056
ccccacaca	acccctctta	accaaatagt	tggcacgtta	taacctccga	accgttccat	29116
gcgtcttgta	taacgcacag	actctgatgg	aattgttcca	attaacgtat	atgccgcata	29176
catgcaggat	aattgtgtgg	gaagtccccg	aaaatcgccg	gtccattgat	acaatcgctg	29236

tctagccaag	ttccaattta	ctcctgtaat	ttcgccaata	ctacatcgag	ggcttgtcgg	29296									
gtcattggat	aactgcacaa	gcggaacgc	ccttgtgtta	tatggctggg	gggtatttgc	29356									
aaccccttca	gtcccccagg	cggcattttc	agctcgtatg	cgtcctaaca	ggaagccaat	29416									
accacgacca	aaacattggt	cgttttagttg	gcttaatgca	agatgcagtc	ttacaccttc	29476									
tcgttggcgt	cgctgtgtat	atacaaaaac	caagaacaca	tgcttcagtc	cgtccgcgga	29536									
aagatgtaaa	tctttgtcaa	cgtcccaaaa	tacgcaggcc	gggatgttgg	ctgtgaccct	29596									
gcgagttgaa	gttttgtctg	tacgtgcagc	ttcttgggga	cctttggcca	cggcgggttat	29656									
attgcataaa	ttatcctgaa	tggtatatct	cagcagggac	ccaaaaaac	ttataaatcg	29716									
atgtggaaat	acatgacatt	gtaccatcgc	acgtaaacac	tccgaaaacc	ttatgagccg	29776									
cgtttccata	cgactgcac	cataggcaga	aacaattgct	gttctgttgg	catccgctgc	29836									
ctgtttatcc	gtatattctt	ctgcccggca	tgccggcgatg	aaacttaatg	acgttacata	29896									
tgctctaagc	ccccacctt	ctccaacggt	ccaaggagcc	gtgcaggcat	tgaatagggt	29956									
tcgtaaacc	tctagtagta	catcggggtc	acgtccagcc	tgtgtaagt	tattagcttc	30016									
tccaatcatg	tcagatggat	gacgaaggat	taagacgatt	gaccagcat	gctcaatgtc	30076									
cggacgaaaa	aaatcggtta	atgacacttg	ttggattagc	tgtgtcgttg	atttaaaatt	30136									
atttaacggg	agtctaattg	taacttgccg	gttaccaatt	gaagtggat	ttatttgaat	30196									
gttgttcata	cgattaataa	caattgaacg	gggggttact	tgaatagacg	cggtttctgt	30256									
acgttttggt	ggtacatgta	tcggttggtt	gttcagacct	ccaagcgag	ggccaattgt	30316									
taaatcgca	ctccaatttc	cgaagaagcc	cggagcataa	gtcatatgaa	gcccgttccc	30376									
tatttgaata	aaacgggttat	ttcctaaaag	actgatatta	gttccacata	gcgtttgttc	30436									
gtttaaagta	aaatgcgagt	tggttggttg	actccccata	gctgaggggt	taaattcaca	30496									
caatgcaatc	gtgacgtggg	actatctgaa	atgttgcttg	gggtatgtgt	acacattata	30556									
cagtcgtagt	accgtttata	taatgttagg	taggaggagc	ctataaaaat	attttgattg	30616									
gcgttaaaag	gttcttcaac	ttaccgtgac	gtccttttta	ttaacatgcg	tttttattga	30676									
tgttacattt	atgtcttttc	attccggacg	gatgtagctt	tttcatatca	cgttataaag	30736									
ttaagtcagc	gtagaatata	cc	atg	gaa	gaa	cca	att	tgt	tat	gat	aca	30785			
			Met	Glu	Glu	Pro	Ile	Cys	Tyr	Asp	Thr				
					3535						3540				
caa	aaa	ctt	ttg	gat	gat	tta	agt	aac	ttg	aaa	gta	caa	gaa	gcg	30830
Gln	Lys	Leu	Leu	Asp	Asp	Leu	Ser	Asn	Leu	Lys	Val	Gln	Glu	Ala	
			3545					3550					3555		
gac	aac	gaa	aga	cca	tgg	tca	cca	gag	aaa	aca	gaa	atc	gcc	aga	30875
Asp	Asn	Glu	Arg	Pro	Trp	Ser	Pro	Glu	Lys	Thr	Glu	Ile	Ala	Arg	

3560								3565				3570				
gtt	aag	gta	gtt	aag	ttt	tta	cga	tct	acc	cag	aaa	att	cca	gct	30920	
Val	Lys	Val	Val	Lys	Phe	Leu	Arg	Ser	Thr	Gln	Lys	Ile	Pro	Ala		
			3575					3580					3585			
aaa	cat	ttt	att	cag	ata	tgg	gaa	ccc	ctg	cat	tct	aat	atc	tgt	30965	
Lys	His	Phe	Ile	Gln	Ile	Trp	Glu	Pro	Leu	His	Ser	Asn	Ile	Cys		
			3590					3595					3600			
ttt	gta	tat	tcc	aat	aca	ttt	ttg	gcg	gag	gct	gct	ttc	acg	gcc	31010	
Phe	Val	Tyr	Ser	Asn	Thr	Phe	Leu	Ala	Glu	Ala	Ala	Phe	Thr	Ala		
			3605					3610					3615			
gaa	aat	tta	ccc	gga	ctg	ttg	ttt	tgg	aga	cta	gat	cta	gac	tgg	31055	
Glu	Asn	Leu	Pro	Gly	Leu	Leu	Phe	Trp	Arg	Leu	Asp	Leu	Asp	Trp		
			3620					3625					3630			
acg	ata	gag	gag	cca	ggt	aat	agc	tta	aaa	att	tta	acc	cag	cta	31100	
Thr	Ile	Glu	Glu	Pro	Gly	Asn	Ser	Leu	Lys	Ile	Leu	Thr	Gln	Leu		
			3635					3640					3645			
tca	agt	gta	gta	caa	gat	tcc	gag	acg	tta	cat	cgt	tta	tcg	gcc	31145	
Ser	Ser	Val	Val	Gln	Asp	Ser	Glu	Thr	Leu	His	Arg	Leu	Ser	Ala		
			3650					3655					3660			
aat	aaa	tta	cga	acc	tcg	tct	aaa	ttt	gga	ccc	ggt	tcg	ata	cac	31190	
Asn	Lys	Leu	Arg	Thr	Ser	Ser	Lys	Phe	Gly	Pro	Val	Ser	Ile	His		
			3665					3670					3675			
ttc	att	ata	acg	gac	tgg	ata	aat	atg	tac	gag	gtc	gcc	tta	aag	31235	
Phe	Ile	Ile	Thr	Asp	Trp	Ile	Asn	Met	Tyr	Glu	Val	Ala	Leu	Lys		
			3680					3685					3690			
gat	gca	aca	aca	gcc	att	gaa	tca	cca	ttc	act	cac	gct	cgt	att	31280	
Asp	Ala	Thr	Thr	Ala	Ile	Glu	Ser	Pro	Phe	Thr	His	Ala	Arg	Ile		
			3695					3700					3705			
gga	atg	ttg	gaa	agc	gcc	att	gca	gct	tta	aca	caa	cat	aaa	ttt	31325	
Gly	Met	Leu	Glu	Ser	Ala	Ile	Ala	Ala	Leu	Thr	Gln	His	Lys	Phe		
			3710					3715					3720			
gcg	atc	att	tac	gat	atg	cca	ttt	gtt	caa	gag	ggg	att	cgt	gtt	31370	
Ala	Ile	Ile	Tyr	Asp	Met	Pro	Phe	Val	Gln	Glu	Gly	Ile	Arg	Val		
			3725					3730					3735			
tta	aca	caa	tat	gca	gga	tgg	ctt	ctt	ccg	ttt	aat	gtt	atg	tgg	31415	
Leu	Thr	Gln	Tyr	Ala	Gly	Trp	Leu	Leu	Pro	Phe	Asn	Val	Met	Trp		
			3740					3745					3750			
aat	cag	att	caa	aat	agc	tca	ctc	act	cct	cta	aca	cga	gcc	ctt	31460	
Asn	Gln	Ile	Gln	Asn	Ser	Ser	Leu	Thr	Pro	Leu	Thr	Arg	Ala	Leu		
			3755					3760					3765			
ttt	ata	atc	tgt	atg	att	gat	gaa	tat	ctc	acg	gaa	acg	cca	gta	31505	
Phe	Ile	Ile	Cys	Met	Ile	Asp	Glu	Tyr	Leu	Thr	Glu	Thr	Pro	Val		
			3770					3775					3780			
cat	agc	ata	tca	gaa	tta	ttt	gca	gat	act	gta	aat	tta	att	aaa	31550	
His	Ser	Ile	Ser	Glu	Leu	Phe	Ala	Asp	Thr	Val	Asn	Leu	Ile	Lys		

3785				3790				3795							
gat	gag	gcg	ttc	gta	tcc	atc	gaa	gaa	gcg	gta	acg	aat	cca	cga	31595
Asp	Glu	Ala	Phe	Val	Ser	Ile	Glu	Glu	Ala	Val	Thr	Asn	Pro	Arg	
			3800										3810		
acg	gtg	cac	gag	tca	cga	att	tcc	tca	gct	ctg	gct	tat	cga	gac	31640
Thr	Val	His	Glu	Ser	Arg	Ile	Ser	Ser	Ala	Leu	Ala	Tyr	Arg	Asp	
			3815										3825		
cct	tat	gtt	ttt	gag	aca	tcc	ccg	gga	atg	ctt	gct	agg	aga	ctt	31685
Pro	Tyr	Val	Phe	Glu	Thr	Ser	Pro	Gly	Met	Leu	Ala	Arg	Arg	Leu	
			3830										3840		
aga	tta	gac	aat	ggt	ata	tgg	gaa	agc	aac	ctc	tta	tcg	ttg	tcc	31730
Arg	Leu	Asp	Asn	Gly	Ile	Trp	Glu	Ser	Asn	Leu	Leu	Ser	Leu	Ser	
			3845										3855		
acc	ccc	gga	att	cat	att	gag	gcg	ctg	tta	cat	tta	cta	aac	tcc	31775
Thr	Pro	Gly	Ile	His	Ile	Glu	Ala	Leu	Leu	His	Leu	Leu	Asn	Ser	
			3860										3870		
gac	ccg	gaa	gcg	gaa	acc	aca	tct	gga	agt	aat	gta	gca	gaa	cac	31820
Asp	Pro	Glu	Ala	Glu	Thr	Thr	Ser	Gly	Ser	Asn	Val	Ala	Glu	His	
			3875										3885		
acc	cgt	ggc	att	tgg	gaa	aag	gtt	cag	gct	agt	aca	tcg	cct	agt	31865
Thr	Arg	Gly	Ile	Trp	Glu	Lys	Val	Gln	Ala	Ser	Thr	Ser	Pro	Ser	
			3890										3900		
atg	tta	ata	agc	acc	ctt	gcc	gaa	tcc	ggg	ttt	aca	aga	ttt	tca	31910
Met	Leu	Ile	Ser	Thr	Leu	Ala	Glu	Ser	Gly	Phe	Thr	Arg	Phe	Ser	
			3905										3915		
tgc	aaa	ttg	cta	cgt	cgg	ttt	att	gct	cac	cac	aca	ctc	gcc	ggt	31955
Cys	Lys	Leu	Leu	Arg	Arg	Phe	Ile	Ala	His	His	Thr	Leu	Ala	Gly	
			3920										3930		
ttt	att	cac	gga	agc	gtt	gta	gca	gac	gag	cat	att	aca	gat	ttc	32000
Phe	Ile	His	Gly	Ser	Val	Val	Ala	Asp	Glu	His	Ile	Thr	Asp	Phe	
			3935										3945		
caa	caa	aca	cta	gga	tgt	ctc	gct	tta	gtg	ggt	gga	ctg	gca	tac	32045
Gln	Gln	Thr	Leu	Gly	Cys	Leu	Ala	Leu	Val	Gly	Gly	Leu	Ala	Tyr	
			3950										3960		
caa	tta	gtg	gaa	acg	tac	gct	cct	act	acc	gag	tat	gtg	tta	aca	32090
Gln	Leu	Val	Glu	Thr	Tyr	Ala	Pro	Thr	Thr	Glu	Tyr	Val	Leu	Thr	
			3965										3975		
tat	aca	cgg	aca	gta	aac	gag	acc	gaa	aaa	cgg	tat	gaa	acg	cta	32135
Tyr	Thr	Arg	Thr	Val	Asn	Glu	Thr	Glu	Lys	Arg	Tyr	Glu	Thr	Leu	
			3980										3990		
tta	ccc	gcc	tta	gga	tta	cca	ccg	gga	ggc	ctg	gga	caa	att	atg	32180
Leu	Pro	Ala	Leu	Gly	Leu	Pro	Pro	Gly	Gly	Leu	Gly	Gln	Ile	Met	
			3995										4005		
cgg	cgc	tgt	ttt	gct	cca	cga	ccc	ctt	att	gaa	agt	ata	caa	gcg	32225
Arg	Arg	Cys	Phe	Ala	Pro	Arg	Pro	Leu	Ile	Glu	Ser	Ile	Gln	Ala	

4010				4015				4020							
aca	cgc	gta	ata	cta	ctt	aat	gaa	att	tca	cat	gca	gaa	gct	aga	32270
Thr	Arg	Val	Ile	Leu	Leu	Asn	Glu	Ile	Ser	His	Ala	Glu	Ala	Arg	
			4025					4030					4035		
gag	aca	aca	tat	ttt	aag	caa	aca	cat	aat	caa	tcc	tca	ggt	gcg	32315
Glu	Thr	Thr	Tyr	Phe	Lys	Gln	Thr	His	Asn	Gln	Ser	Ser	Gly	Ala	
			4040					4045					4050		
tta	tta	cca	caa	gca	gga	caa	agt	gcc	gta	cgc	gaa	gcc	gta	cta	32360
Leu	Leu	Pro	Gln	Ala	Gly	Gln	Ser	Ala	Val	Arg	Glu	Ala	Val	Leu	
			4055					4060					4065		
acc	tgg	ttt	gac	cta	cgt	atg	gat	tca	aga	tgg	ggt	att	act	ccc	32405
Thr	Trp	Phe	Asp	Leu	Arg	Met	Asp	Ser	Arg	Trp	Gly	Ile	Thr	Pro	
			4070					4075					4080		
ccg	gtg	gat	gtg	ggt	atg	aca	cct	cct	att	tgt	gtt	gat	cca	ccg	32450
Pro	Val	Asp	Val	Gly	Met	Thr	Pro	Pro	Ile	Cys	Val	Asp	Pro	Pro	
			4085					4090					4095		
gct	aca	ggg	ttg	gaa	gct	gtc	atg	ata	aca	gaa	gca	cta	aag	att	32495
Ala	Thr	Gly	Leu	Glu	Ala	Val	Met	Ile	Thr	Glu	Ala	Leu	Lys	Ile	
			4100					4105					4110		
gca	tat	cct	acc	gaa	tat	aat	cgc	tct	agc	gtg	ttt	gtg	gaa	ccg	32540
Ala	Tyr	Pro	Thr	Glu	Tyr	Asn	Arg	Ser	Ser	Val	Phe	Val	Glu	Pro	
			4115					4120					4125		
tcg	ttt	gtg	cct	tat	att	att	gca	aca	agc	acg	ctt	gat	gcc	ctt	32585
Ser	Phe	Val	Pro	Tyr	Ile	Ile	Ala	Thr	Ser	Thr	Leu	Asp	Ala	Leu	
			4130					4135					4140		
tcg	gca	aca	ata	gct	ttg	tct	ttt	gat	aca	cgg	gga	ata	cag	caa	32630
Ser	Ala	Thr	Ile	Ala	Leu	Ser	Phe	Asp	Thr	Arg	Gly	Ile	Gln	Gln	
			4145					4150					4155		
gcc	ttg	tct	att	ctt	cag	tgg	gct	cgc	gat	tat	gga	tcc	gga	acc	32675
Ala	Leu	Ser	Ile	Leu	Gln	Trp	Ala	Arg	Asp	Tyr	Gly	Ser	Gly	Thr	
			4160					4165					4170		
gtg	ccc	aat	gca	gat	gga	tat	cgc	aca	aaa	cta	tct	gct	ctt	ata	32720
Val	Pro	Asn	Ala	Asp	Gly	Tyr	Arg	Thr	Lys	Leu	Ser	Ala	Leu	Ile	
			4175					4180					4185		
aca	ata	tta	gaa	cct	ttt	acc	cgt	aca	cac	ccc	cca	gta	ctt	tta	32765
Thr	Ile	Leu	Glu	Pro	Phe	Thr	Arg	Thr	His	Pro	Pro	Val	Leu	Leu	
			4190					4195					4200		
cca	tct	cac	gtt	tct	act	ata	gat	tcc	ctt	ata	tgc	gaa	ctt	cat	32810
Pro	Ser	His	Val	Ser	Thr	Ile	Asp	Ser	Leu	Ile	Cys	Glu	Leu	His	
			4205					4210					4215		
cgg	act	gtt	ggc	att	gcc	gtt	gac	ctg	ctt	ccc	cag	cac	gtc	cgt	32855
Arg	Thr	Val	Gly	Ile	Ala	Val	Asp	Leu	Leu	Pro	Gln	His	Val	Arg	
			4220					4225					4230		
cct	ttg	gtt	cct	gac	cgt	cct	tct	att	aca	aat	agc	gtt	ttt	tta	32900
Pro	Leu	Val	Pro	Asp	Arg	Pro	Ser	Ile	Thr	Asn	Ser	Val	Phe	Leu	

4235				4240				4245							
gca	act	ctc	tat	tat	gat	gaa	ctt	tac	ggg	cgt	tgg	acc	cga	ctg	32945
Ala	Thr	Leu	Tyr	Tyr	Asp	Glu	Leu	Tyr	Gly	Arg	Trp	Thr	Arg	Leu	
			4250					4255					4260		
gat	aaa	aca	tcg	cag	gcg	ttg	gtt	gaa	aat	ttt	aca	tcc	aac	gcg	32990
Asp	Lys	Thr	Ser	Gln	Ala	Leu	Val	Glu	Asn	Phe	Thr	Ser	Asn	Ala	
			4265					4270					4275		
tta	gtg	gtt	tct	cgg	tac	atg	tta	atg	tta	caa	aaa	ttt	ttt	gcg	33035
Leu	Val	Val	Ser	Arg	Tyr	Met	Leu	Met	Leu	Gln	Lys	Phe	Phe	Ala	
			4280					4285					4290		
tgt	cgt	ttt	tat	cca	acg	cca	gat	ctt	cag	gct	gtt	ggg	atc	tgt	33080
Cys	Arg	Phe	Tyr	Pro	Thr	Pro	Asp	Leu	Gln	Ala	Val	Gly	Ile	Cys	
			4295					4300					4305		
aac	cca	aag	gtt	gaa	cgc	gat	gaa	caa	ttt	ggg	gta	tgg	cgt	tta	33125
Asn	Pro	Lys	Val	Glu	Arg	Asp	Glu	Gln	Phe	Gly	Val	Trp	Arg	Leu	
			4310					4315					4320		
aac	gat	ctt	gct	gat	gcg	gtt	ggg	cat	att	gtt	ggg	aca	ata	caa	33170
Asn	Asp	Leu	Ala	Asp	Ala	Val	Gly	His	Ile	Val	Gly	Thr	Ile	Gln	
			4325					4330					4335		
gga	atc	cga	acg	caa	atg	aga	gtg	gga	ata	tcc	agc	ctg	cgc	aca	33215
Gly	Ile	Arg	Thr	Gln	Met	Arg	Val	Gly	Ile	Ser	Ser	Leu	Arg	Thr	
			4340					4345					4350		
att	atg	gcc	gat	gct	tcc	tca	gcc	ctt	agg	gaa	tgt	gaa	aat	tta	33260
Ile	Met	Ala	Asp	Ala	Ser	Ser	Ala	Leu	Arg	Glu	Cys	Glu	Asn	Leu	
			4355					4360					4365		
atg	act	aaa	acc	tcc	act	tct	gct	att	ggg	cct	ctt	ttt	tca	acg	33305
Met	Thr	Lys	Thr	Ser	Thr	Ser	Ala	Ile	Gly	Pro	Leu	Phe	Ser	Thr	
			4370					4375					4380		
atg	gct	tcc	cgg	tat	gca	cgg	ttt	aca	cag	gat	caa	atg	gac	att	33350
Met	Ala	Ser	Arg	Tyr	Ala	Arg	Phe	Thr	Gln	Asp	Gln	Met	Asp	Ile	
			4385					4390					4395		
tta	atg	cgt	gtt	gac	aaa	cta	aca	aca	gga	gaa	aat	ata	ccc	ggg	33395
Leu	Met	Arg	Val	Asp	Lys	Leu	Thr	Thr	Gly	Glu	Asn	Ile	Pro	Gly	
			4400					4405					4410		
ctt	gca	aat	gta	gag	att	ttt	tta	aat	agg	tgg	gaa	cga	ata	gca	33440
Leu	Ala	Asn	Val	Glu	Ile	Phe	Leu	Asn	Arg	Trp	Glu	Arg	Ile	Ala	
			4415					4420					4425		
aca	gct	tgt	agg	cat	gcc	acg	gca	gtc	ccg	tcg	gcc	gaa	tct	att	33485
Thr	Ala	Cys	Arg	His	Ala	Thr	Ala	Val	Pro	Ser	Ala	Glu	Ser	Ile	
			4430					4435					4440		
gca	acc	gtg	tgt	aat	gaa	ttg	agg	cgc	ggg	tta	aaa	aat	ata	caa	33530
Ala	Thr	Val	Cys	Asn	Glu	Leu	Arg	Arg	Gly	Leu	Lys	Asn	Ile	Gln	
			4445					4450					4455		
gag	gat	cgt	gta	aat	gcc	cca	acc	tca	tat	atg	agt	cac	gcc	cga	33575
Glu	Asp	Arg	Val	Asn	Ala	Pro	Thr	Ser	Tyr	Met	Ser	His	Ala	Arg	

4460	4465	4470	
aat ctg gaa gat Asn Leu Glu Asp 4475	cac aag gca gca gtt His Lys Ala Ala Val 4480	tca ttc gtt atg gac tcc Ser Phe Val Met Asp Ser 4485	33620
agg caa cag ttt Arg Gln Gln Phe 4490	att gtg gat tct gga Ile Val Asp Ser Gly 4495	cct cag atg ggc gcg gtt Pro Gln Met Gly Ala Val 4500	33665
tta act tca caa Leu Thr Ser Gln 4505	tgt aat ata gga aca Cys Asn Ile Gly Thr 4510	tgg gag aat gta aat gca Trp Glu Asn Val Asn Ala 4515	33710
acg ttt tta cat Thr Phe Leu His 4520	gat aat gtt aaa ata Asp Asn Val Lys Ile 4525	acg aca acg gtc aga gac Thr Thr Thr Val Arg Asp 4530	33755
gta att tca gag Val Ile Ser Glu 4535	gct ccg acg ctg ata Ala Pro Thr Leu Ile 4540	ata gga caa aga tgg ctt Ile Gly Gln Arg Trp Leu 4545	33800
cgt cca gat gag Arg Pro Asp Glu 4550	att tta tct aat gta Ile Leu Ser Asn Val 4555	gat ttg cgt ctt ggc gta Asp Leu Arg Leu Gly Val 4560	33845
ccc ggg aat aca Pro Gly Asn Thr 4565	agt ggg agt gac cct Ser Gly Ser Asp Pro 4570	taa tataaaacag gcgtgtttat	33895
gtacattaaa gtatttgtgg tttttattga ctgggctgtt cgtttgtata acgctgttgt			33955
tgctagtatt ttcataacct cctagggtttt tggagctaca cgtgcttatt caacgctctt			34015
tgggatttga atcatcgtaa acgtagcgtc cctaccagtt gagcgcgtaa ttttcgtaag			34075
caataaaa atg gat ata att ccg cct ata gct gtc act gtt gcg gga gtg Met Asp Ile Ile Pro Pro Ile Ala Val Thr Val Ala Gly Val 4575 4580			34124
gga agc cgt aat caa ttt gac ggt gcc ctg gga ccg gcg tca ggt Gly Ser Arg Asn Gln Phe Asp Gly Ala Leu Gly Pro Ala Ser Gly 4585 4590 4595			34169
ctg tca tgt tta aga aca tct tta tcg ttt ttg cat atg aca tat Leu Ser Cys Leu Arg Thr Ser Leu Ser Phe Leu His Met Thr Tyr 4600 4605 4610			34214
gcg cat gga att aat gca acc ctg tca tca gac atg att gat gga Ala His Gly Ile Asn Ala Thr Leu Ser Ser Asp Met Ile Asp Gly 4615 4620 4625			34259
tgt tta caa gag ggt gca gca tgg act acg gat ctg tct aat atg Cys Leu Gln Glu Gly Ala Ala Trp Thr Thr Asp Leu Ser Asn Met 4630 4635 4640			34304
ggg agg ggt gtc cca gat atg tgt gct ctt gtt gat ctc ccc aat Gly Arg Gly Val Pro Asp Met Cys Ala Leu Val Asp Leu Pro Asn 4645 4650 4655			34349

cga Arg 4660	att Ile	tca Ser	tat Tyr	att Ile	aaa Lys 4665	ctg Leu	ggg Gly	gac Asp	act Thr	acc Thr 4670	agt Ser	acg Thr	tgc Cys	tgc Cys	34394
gtt Val 4675	ttg Leu	tct Ser	aga Arg	ata Ile	tac Tyr 4680	ggc Gly	gat Asp	agc Ser	cat His	ttt Phe 4685	ttt Phe	acc Thr	gtt Val	cca Pro	34439
gac Asp 4690	gag Glu	ggt Gly	ttt Phe	atg Met	tgc Cys 4695	aca Thr	caa Gln	att Ile	ccc Pro	gct Ala 4700	aga Arg	gcg Ala	ttt Phe	ttc Phe	34484
gat Asp 4705	gat Asp	gtg Val	tgg Trp	atg Met	gga Gly 4710	cgt Arg	gaa Glu	gag Glu	tcg Ser	tat Tyr 4715	aca Thr	att Ile	ata Ile	act Thr	34529
gta Val 4720	gac Asp	tca Ser	acg Thr	gga Gly	atg Met 4725	gcc Ala	atc Ile	tat Tyr	cgt Arg	cag Gln 4730	gga Gly	aac Asn	ata Ile	tct Ser	34574
ttt Phe 4735	att Ile	ttt Phe	gat Asp	cca Pro	cat His 4740	ggc Gly	cat His	ggg Gly	act Thr	ata Ile 4745	gga Gly	cag Gln	gct Ala	gta Val	34619
gtt Val 4750	gtt Val	cgg Arg	gtg Val	aat Asn	acc Thr 4755	acg Thr	gat Asp	gtg Val	tac Tyr	tct Ser 4760	tat Tyr	atc Ile	gca Ala	tcg Ser	34664
gag Glu 4765	tat Tyr	acc Thr	cac His	cgc Arg	ccc Pro 4770	gat Asp	aac Asn	gta Val	gaa Glu	tcc Ser 4775	caa Gln	tgg Trp	gcc Ala	gct Ala	34709
gca Ala 4780	tta Leu	gtt Val	ttt Phe	ttt Phe	gtc Val 4785	acc Thr	gca Ala	aac Asn	gac Asp	ggt Gly 4790	ccc Pro	gta Val	agc Ser	gaa Glu	34754
gaa Glu 4795	gcg Ala	cta Leu	tct Ser	tcg Ser	gca Ala 4800	gta Val	acg Thr	ctt Leu	ata Ile	tac Tyr 4805	gga Gly	agc Ser	tgt Cys	gat Asp	34799
aca Thr 4810	tat Tyr	ttt Phe	aca Thr	gat Asp	gaa Glu 4815	caa Gln	tat Tyr	tgc Cys	gaa Glu	aaa Lys 4820	ctg Leu	gtt Val	aca Thr	gct Ala	34844
caa Gln 4825	cat His	ccg Pro	ttg Leu	ctt Leu	ctt Leu 4830	tca Ser	cct Pro	cct Pro	aat Asn	tcc Ser 4835	acg Thr	aca Thr	att Ile	gtg Val	34889
ctt Leu 4840	aat Asn	aaa Lys	tcg Ser	tct Ser	ata Ile 4845	gta Val	cct Pro	ctt Leu	cac His	caa Gln 4850	aac Asn	gtt Val	ggt Gly	gaa Glu	34934
agt Ser 4855	gta Val	tcc Ser	ttg Leu	gaa Glu	gca Ala 4860	acc Thr	cta Leu	cat His	tca Ser	acg Thr 4865	tta Leu	acc Thr	aac Asn	acg Thr	34979
gtt Val 4870	gca Ala	ctg Leu	gac Asp	cct Pro	aga Arg 4875	tgt Cys	agt Ser	tac Tyr	agc Ser	gag Glu 4880	gtt Val	gat Asp	cct Pro	tgg Trp	35024

cat His 4885	gcg Ala	gtt Val	cta Leu	gaa Glu	aca Thr 4890	acc Thr	tcg Ser	act Thr	ggg Gly	tct Ser 4895	ggc Gly	gtt Val	ttg Leu	gat Asp	35069
tgt Cys 4900	cgt Arg	cgt Arg	aga Arg	cgc Arg	cgt Arg 4905	cct Pro	tca Ser	tgg Trp	act Thr	cct Pro 4910	cct Pro	tca Ser	agc Ser	gag Glu	35114
gaa Glu 4915	aat Asn	tta Leu	gct Ala	tgt Cys	atc Ile 4920	gac Asp	gat Asp	ggc Gly	ttg Leu	gta Val 4925	aat Asn	aat Asn	aca Thr	cat His	35159
tcc Ser 4930	acg Thr	gat Asp	aat Asn	tta Leu	cat His 4935	aaa Lys	ccc Pro	gct Ala	aaa Lys	aag Lys 4940	gtt Val	ctc Leu	aaa Lys	ttt Phe	35204
aaa Lys 4945	cca Pro	act Thr	gta Val	gac Asp	gtg Val 4950	ccg Pro	gat Asp	aaa Lys	aca Thr	caa Gln 4955	gtg Val	gca Ala	cat His	gta Val	35249
tta Leu 4960	ccc Pro	cgc Arg	cta Leu	cga Arg	gaa Glu 4965	gtt Val	gct Ala	aac Asn	acc Thr	cca Pro 4970	gac Asp	gtt Val	gtg Val	tta Leu	35294
aat Asn 4975	gta Val	tcc Ser	aat Asn	gta Val	gat Asp 4980	acg Thr	cct Pro	gaa Glu	tcc Ser	agt Ser 4985	ccc Pro	act Thr	ttt Phe	tca Ser	35339
cgg Arg 4990	aac Asn	atg Met	aat Asn	gta Val	gga Gly 4995	agc Ser	agt Ser	ttg Leu	aaa Lys	gat Asp 5000	cgg Arg	aag Lys	cca Pro	ttt Phe	35384
cta Leu 5005	ttt Phe	gaa Glu	cag Gln	agt Ser	ggg Gly 5010	gat Asp	gtc Val	aac Asn	atg Met	gtt Val 5015	gtc Val	gaa Glu	aaa Lys	cta Leu	35429
cta Leu 5020	caa Gln	cat His	ggg Gly	cat His	gaa Glu 5025	att Ile	agc Ser	aat Asn	gga Gly	tac Tyr 5030	gta Val	caa Gln	aat Asn	gcg Ala	35474
gtg Val 5035	ggg Gly	acg Thr	ttg Leu	gat Asp	act Thr 5040	gtt Val	att Ile	acc Thr	ggg Gly	cat His 5045	aca Thr	aat Asn	gtt Val	ccc Pro	35519
att Ile 5050	tgg Trp	gta Val	aca Thr	agg Arg	ccc Pro 5055	ttg Leu	gtt Val	atg Met	cca Pro	gac Asp 5060	gaa Glu	aag Lys	gat Asp	cca Pro	35564
ttg Leu 5065	gag Glu	ctt Leu	ttt Phe	att Ile	aac Asn 5070	ctc Leu	acc Thr	att Ile	ttg Leu	cgt Arg 5075	tta Leu	acg Thr	gga Gly	ttt Phe	35609
gtg Val 5080	gtg Val	gaa Glu	aat Asn	gga Gly	aca Thr 5085	cgt Arg	aca Thr	cat His	cat His	ggg Gly 5090	gct Ala	aca Thr	agc Ser	gtt Val	35654
gta Val 5095	tca Ser	gac Asp	ttt Phe	ata Ile	ggg Gly 5100	ccc Pro	ctt Leu	ggg Gly	gaa Glu	att Ile 5105	tta Leu	aca Thr	gga Gly	ttt Phe	35699

ccc Pro 5110	tcc Ser	gcc Ala	gcg Ala	gaa Glu	ctt Leu 5115	ata Ile	cgc Arg	gtt Val	aca Thr	agt Ser 5120	ttg Leu	ata Ile	tta Leu	aca Thr	35744
aac Asn 5125	atg Met	ccg Pro	ggg Gly	gcg Ala	gaa Glu 5130	tat Tyr	gct Ala	att Ile	aaa Lys	act Thr 5135	gtt Val	ctc Leu	cgg Arg	aaa Lys	35789
aaa Lys 5140	tgt Cys	aca Thr	att Ile	ggc Gly	atg Met 5145	ctc Leu	att Ile	atc Ile	gct Ala	aag Lys 5150	ttt Phe	ggg Gly	cta Leu	gtt Val	35834
gcc Ala 5155	atg Met	cgg Arg	gtt Val	cag Gln	gat Asp 5160	aca Thr	acc Thr	ggc Gly	gct Ala	tta Leu 5165	cat His	gcc Ala	gaa Glu	cta Leu	35879
gat Asp 5170	gtg Val	tta Leu	gaa Glu	gcg Ala	gat Asp 5175	cta Leu	gga Gly	ggg Gly	tcg Ser	tcg Ser 5180	ccc Pro	ata Ile	gac Asp	ctc Leu	35924
tat Tyr 5185	tct Ser	aga Arg	ctg Leu	tcg Ser	aca Thr 5190	ggg Gly	ctt Leu	ata Ile	agt Ser	ata Ile 5195	cta Leu	aat Asn	tcg Ser	cct Pro	35969
att Ile 5200	att Ile	tct Ser	cat His	ccc Pro	gga Gly 5205	ctt Leu	ttt Phe	gcc Ala	gag Glu	ctt Leu 5210	att Ile	cca Pro	acc Thr	cgt Arg	36014
aca Thr 5215	ggg Gly	tcc Ser	ctg Leu	tct Ser	gaa Glu 5220	cga Arg	ata Ile	cgt Arg	ctt Leu	ctt Leu 5225	tgt Cys	gaa Glu	tta Leu	gtc Val	36059
tcg Ser 5230	gcc Ala	cgg Arg	gag Glu	aca Thr	cgc Arg 5235	tat Tyr	atg Met	cgt Arg	gaa Glu	cac His 5240	acc Thr	gcg Ala	ctt Leu	gtt Val	36104
tct Ser 5245	agt Ser	gta Val	aag Lys	gct Ala	tta Leu 5250	gag Glu	aat Asn	gca Ala	tta Leu	cgg Arg 5255	tct Ser	acc Thr	cgc Arg	aat Asn	36149
aaa Lys 5260	att Ile	gat Asp	gcc Ala	att Ile	caa Gln 5265	ata Ile	cca Pro	gaa Glu	gtt Val	ccc Pro 5270	cag Gln	gaa Glu	ccc Pro	ccg Pro	36194
gaa Glu 5275	gaa Glu	acc Thr	gac Asp	att Ile	cca Pro 5280	ccc Pro	gaa Glu	gag Glu	tta Leu	att Ile 5285	cgg Arg	cgt Arg	gta Val	tat Tyr	36239
gag Glu 5290	ata Ile	cga Arg	tcc Ser	gaa Glu	gtt Val 5295	aca Thr	atg Met	cta Leu	ttg Leu	acc Thr 5300	tcg Ser	gct Ala	gtt Val	aca Thr	36284
gaa Glu 5305	tac Tyr	ttc Phe	acc Thr	cgc Arg	gga Gly 5310	gtg Val	tta Leu	tat Tyr	agc Ser	aca Thr 5315	cgg Arg	gcc Ala	ttg Leu	atc Ile	36329
gct Ala 5320	gaa Glu	caa Gln	tcc Ser	cct Pro	agg Arg 5325	cgt Arg	ttt Phe	cgg Arg	gtc Val	gcg Ala 5330	acc Thr	gca Ala	agt Ser	acg Thr	36374

gca Ala 5335	ccc Pro	att Ile	caa Gln	cgg Arg	ctt Leu 5340	tta Leu	gat Asp	tct Ser	ctt Leu	ccg Pro 5345	gaa Glu	ttc Phe	gac Asp	gct Ala	36419
aaa Lys 5350	tta Leu	acg Thr	gca Ala	atc Ile	ata Ile 5355	tcg Ser	tcc Ser	ctg Leu	tct Ser	ata Ile 5360	cac His	cct Pro	cct Pro	cct Pro	36464
gag Glu 5365	act Thr	ata Ile	caa Gln	aat Asn	ctc Leu 5370	ccc Pro	gtc Val	gta Val	tct Ser	ctg Leu 5375	tta Leu	aaa Lys	gag Glu	ctt Leu	36509
att Ile 5380	aaa Lys	gaa Glu	ggg Gly	gaa Glu	gat Asp 5385	tta Leu	aac Asn	aca Thr	gac Asp	acg Thr 5390	gct Ala	ctc Leu	gta Val	tcg Ser	36554
tgg Trp 5395	tta Leu	tct Ser	gta Val	gtc Val	ggg Gly 5400	gaa Glu	gct Ala	caa Gln	acc Thr	gca Ala 5405	ggg Gly	tac Tyr	tta Leu	tcc Ser	36599
aga Arg 5410	cga Arg	gag Glu	ttc Phe	gat Asp	gaa Glu 5415	tta Leu	tca Ser	cgt Arg	aca Thr	att Ile 5420	aaa Lys	acc Thr	att Ile	aat Asn	36644
aca Thr 5425	cgc Arg	gca Ala	acg Thr	caa Gln	cgg Arg 5430	gct Ala	tcc Ser	gcg Ala	gaa Glu	gca Ala 5435	gag Glu	ttg Leu	tct Ser	tgc Cys	36689
ttt Phe 5440	aat Asn	acg Thr	cta Leu	agc Ser	gcg Ala 5445	gcc Ala	gta Val	gac Asp	caa Gln	gcc Ala 5450	gta Val	aag Lys	gac Asp	tat Tyr	36734
gaa Glu 5455	aca Thr	tat Tyr	aac Asn	aat Asn	ggg Gly 5460	gag Glu	gtc Val	aag Lys	tat Tyr	cct Pro 5465	gaa Glu	ata Ile	aca Thr	cgg Arg	36779
gat Asp 5470	gat Asp	tta Leu	tta Leu	gca Ala	aca Thr 5475	att Ile	gta Val	cgt Arg	gct Ala	aca Thr 5480	gac Asp	gat Asp	ttg Leu	gtg Val	36824
cga Arg 5485	cag Gln	ata Ile	aaa Lys	att Ile	tta Leu 5490	agt Ser	gat Asp	cca Pro	atg Met	atc Ile 5495	caa Gln	tcc Ser	ggg Gly	tta Leu	36869
caa Gln 5500	cct Pro	tcg Ser	att Ile	aaa Lys	aga Arg 5505	cga Arg	ttg Leu	gaa Glu	aca Thr	agg Arg 5510	ctt Leu	aaa Lys	gag Glu	gtt Val	36914
cag Gln 5515	acg Thr	tat Tyr	gca Ala	aac Asn	gag Glu 5520	gcc Ala	cga Arg	acc Thr	aca Thr	cag Gln 5525	gac Asp	aca Thr	ata Ile	aag Lys	36959
agt Ser 5530	cga Arg	aaa Lys	cag Gln	gcg Ala	gca Ala 5535	tat Tyr	aat Asn	aaa Lys	ctc Leu	ggg Gly 5540	ggg Gly	tta Leu	ctt Leu	cgc Arg	37004
ccg Pro 5545	gta Val	acc Thr	ggg Gly	ttt Phe	gtg Val 5550	gga Gly	ctt Leu	agg Arg	gct Ala	gca Ala 5555	gta Val	gat Asp	tta Leu	tta Leu	37049

ccg Pro 5560	gaa Glu	ctt Leu	gct Ala	tct Ser	gag Glu 5565	tta Leu	gat Asp	gtc Val	caa Gln	gga Gly 5570	gcc Ala	ctg Leu	gta Val	aat Asn	37094
ctc Leu 5575	agg Arg	acc Thr	aaa Lys	gtc Val	tta Leu 5580	gag Glu	gcg Ala	ccg Pro	gta Val	gag Glu 5585	atc Ile	cgt Arg	tct Ser	caa Gln	37139
ctt Leu 5590	acg Thr	ggt Gly	gat Asp	ttc Phe	tgg Trp 5595	gcg Ala	tta Leu	ttt Phe	aac Asn	caa Gln 5600	tat Tyr	cga Arg	gac Asp	att Ile	37184
tta Leu 5605	gaa Glu	cat His	ccc Pro	gga Gly	aac Asn 5610	gca Ala	cg Arg	aca Thr	tct Ser	gtc Val 5615	tta Leu	gga Gly	gga Gly	ctg Leu	37229
gga Gly 5620	gct Ala	tgt Cys	ttt Phe	aca Thr	gct Ala 5625	att Ile	atc Ile	gaa Glu	att Ile	gtg Val 5630	ccg Pro	ata Ile	cct Pro	acg Thr	37274
gag Glu 5635	tat Tyr	aga Arg	cca Pro	tca Ser	ttg Leu 5640	ctt Leu	gcg Ala	ttt Phe	ttt Phe	ggt Gly 5645	gac Asp	gtg Val	gca Ala	gat Asp	37319
gtg Val 5650	ctt Leu	gca Ala	tcc Ser	gac Asp	atc Ile 5655	gcg Ala	acc Thr	gta Val	tct Ser	act Thr 5660	aac Asn	ccg Pro	gaa Glu	agt Ser	37364
gag Glu 5665	tcc Ser	gcc Ala	ata Ile	aac Asn	gct Ala 5670	gtt Val	gtt Val	gca Ala	act Thr	ctt Leu 5675	agt Ser	aaa Lys	gcg Ala	acg Thr	37409
tta Leu 5680	gtt Val	tca Ser	tct Ser	aca Thr	gtg Val 5685	cca Pro	gcc Ala	tta Leu	tcc Ser	ttt Phe 5690	gtg Val	ttg Leu	tcg Ser	tta Leu	37454
tat Tyr 5695	aaa Lys	aaa Lys	tat Tyr	cag Gln	gct Ala 5700	tta Leu	caa Gln	caa Gln	gaa Glu	att Ile 5705	acg Thr	aat Asn	acc Thr	cat His	37499
aag Lys 5710	ttg Leu	act Thr	gaa Glu	tta Leu	caa Gln 5715	aaa Lys	caa Gln	ctt Leu	gga Gly	gat Asp 5720	gac Asp	ttc Phe	tcc Ser	acc Thr	37544
cta Leu 5725	gct Ala	gtc Val	tca Ser	tct Ser	gga Gly 5730	cac His	ttg Leu	aag Lys	ttt Phe	ata Ile 5735	tca Ser	tct Ser	tca Ser	aat Asn	37589
gta Val 5740	gat Asp	gat Asp	tat Tyr	gaa Glu	ata Ile 5745	aac Asn	gat Asp	gcg Ala	ata Ile	tta Leu 5750	tca Ser	ata Ile	caa Gln	aca Thr	37634
aat Asn 5755	gtg Val	cac His	gcc Ala	cta Leu	atg Met 5760	gat Asp	acg Thr	gtt Val	aaa Lys	ctt Leu 5765	gtt Val	gaa Glu	gtt Val	gaa Glu	37679
ctg Leu 5770	caa Gln	aag Lys	cta Leu	ccc Pro	ccc Pro 5775	cat His	tgt Cys	att Ile	gct Ala	ggg Gly 5780	aca Thr	tct Ser	acc Thr	tta Leu	37724

tct Ser 5785	cga Arg	gta Val	gta Val	aag Lys	gat Asp 5790	ctt Leu	cat His	aaa Lys	ctc Leu	gtc Val 5795	aca Thr	atg Met	gca Ala	cat His	37769
gag Glu 5800	aag Lys	aag Lys	gaa Glu	cag Gln	gca Ala 5805	aaa Lys	gtg Val	tta Leu	att Ile	acc Thr 5810	gat Asp	tgt Cys	gaa Glu	cgt Arg	37814
gca Ala 5815	cat His	aaa Lys	caa Gln	caa Gln	acg Thr 5820	act Thr	cgg Arg	gtt Val	ttg Leu	tat Tyr 5825	gag Glu	cgt Arg	tgg Trp	aca Thr	37859
cgt Arg 5830	gat Asp	att Ile	ata Ile	gca Ala	tgt Cys 5835	ctg Leu	gag Glu	gca Ala	atg Met	gaa Glu 5840	acg Thr	cgc Arg	cat His	ata Ile	37904
ttt Phe 5845	aac Asn	ggg Gly	aca Thr	gaa Glu	ctg Leu 5850	gca Ala	cgg Arg	ttg Leu	cga Arg	gat Asp 5855	atg Met	gcc Ala	gct Ala	gcg Ala	37949
gga Gly 5860	ggg Gly	ttt Phe	gat Asp	ata Ile	cac His 5865	gca Ala	gtt Val	tac Tyr	cca Pro	caa Gln 5870	gca Ala	cgt Arg	cag Gln	gtt Val	37994
gta Val 5875	gcg Ala	gca Ala	tgt Cys	gaa Glu	act Thr 5880	aca Thr	gcc Ala	gtt Val	acg Thr	gca Ala 5885	tta Leu	gat Asp	act Thr	gtg Val	38039
ttt Phe 5890	cgc Arg	cac His	aat Asn	cca Pro	tat Tyr 5895	acc Thr	ccc Pro	gaa Glu	aat Asn	aca Thr 5900	aat Asn	att Ile	cca Pro	cca Pro	38084
cct Pro 5905	ttg Leu	gct Ala	ttg Leu	tta Leu	aga Arg 5910	ggg Gly	tta Leu	aca Thr	tgg Trp	ttt Phe 5915	gat Asp	gat Asp	ttt Phe	tcg Ser	38129
att Ile 5920	acg Thr	gct Ala	ccc Pro	gta Val	ttc Phe 5925	acc Thr	gtt Val	atg Met	ttt Phe	cca Pro 5930	ggg Gly	gtt Val	agt Ser	att Ile	38174
gag Glu 5935	gga Gly	ctc Leu	ctt Leu	ctg Leu	ctt Leu 5940	atg Met	cgt Arg	att Ile	cgc Arg	gcg Ala 5945	gtt Val	gtg Val	tta Leu	tta Leu	38219
tcc Ser 5950	gcc Ala	gat Asp	acg Thr	tct Ser	att Ile 5955	aat Asn	gga Gly	ata Ile	cct Pro	aac Asn 5960	tac Tyr	cga Arg	gat Asp	atg Met	38264
ata Ile 5965	tta Leu	cga Arg	acc Thr	tcg Ser	ggg Gly 5970	gat Asp	cta Leu	tta Leu	caa Gln	ata Ile 5975	ccc Pro	gca Ala	ttg Leu	gct Ala	38309
ggg Gly 5980	tat Tyr	gtt Val	gat Asp	ttt Phe	tac Tyr 5985	aca Thr	cgg Arg	tct Ser	tat Tyr	gat Asp 5990	cag Gln	ttt Phe	ata Ile	acc Thr	38354
gaa Glu 5995	agt Ser	gta Val	acg Thr	tta Leu	agt Ser 6000	gaa Glu	ctt Leu	aga Arg	gca Ala	gac Asp 6005	atc Ile	aga Arg	cag Gln	gct Ala	38399

gcc Ala 6010	ggg Gly	gct Ala	aaa Lys	ctt Leu	aca Thr 6015	gaa Glu	gca Ala	aat Asn	aag Lys	gct Ala 6020	ttg Leu	gag Glu	gaa Glu	gta Val	38444
act Thr 6025	cat His	gtt Val	cgg Arg	gca Ala	cac His 6030	gaa Glu	acg Thr	gct Ala	aaa Lys	ctt Leu 6035	gca Ala	ctt Leu	aaa Lys	gaa Glu	38489
ggt Gly 6040	gtc Val	ttc Phe	att Ile	aca Thr	tta Leu 6045	cca Pro	agc Ser	gaa Glu	ggt Gly	tta Leu 6050	ttg Leu	att Ile	cgg Arg	gct Ala	38534
ata Ile 6055	gag Glu	tat Tyr	ttt Phe	aca Thr	act Thr 6060	ttc Phe	gat Asp	cat His	aaa Lys	cga Arg 6065	ttt Phe	ata Ile	gga Gly	acg Thr	38579
gca Ala 6070	tat Tyr	gaa Glu	aga Arg	gtt Val	tta Leu 6075	caa Gln	aca Thr	atg Met	gta Val	gac Asp 6080	cgc Arg	gat Asp	cta Leu	aag Lys	38624
gag Glu 6085	gcc Ala	aac Asn	gca Ala	gag Glu	ctt Leu 6090	gca Ala	cag Gln	ttt Phe	cgt Arg	atg Met 6095	gtg Val	tgt Cys	cag Gln	gca Ala	38669
aca Thr 6100	aag Lys	aac Asn	cgt Arg	gca Ala	ata Ile 6105	caa Gln	att Ile	tta Leu	caa Gln	aac Asn 6110	att Ile	gtt Val	gat Asp	acg Thr	38714
gcc Ala 6115	aat Asn	gcc Ala	act Thr	gag Glu	caa Gln 6120	caa Gln	gaa Glu	gac Asp	gtg Val	gat Asp 6125	ttc Phe	act Thr	aac Asn	ctg Leu	38759
aag Lys 6130	acg Thr	tta Leu	tta Leu	aaa Lys	cta Leu 6135	acc Thr	ccc Pro	cct Pro	ccc Pro	aaa Lys 6140	aca Thr	att Ile	gca Ala	ttg Leu	38804
gcc Ala 6145	att Ile	gat Asp	aga Arg	tct Ser	act Thr 6150	tcc Ser	gtt Val	cag Gln	gac Asp	att Ile 6155	gtc Val	acg Thr	cag Gln	ttt Phe	38849
gca Ala 6160	ttg Leu	ctg Leu	tta Leu	ggg Gly	cgt Arg 6165	ctg Leu	gaa Glu	gaa Glu	gaa Glu	act Thr 6170	ggt Gly	acg Thr	ttg Leu	gac Asp	38894
att Ile 6175	cag Gln	gcg Ala	gtt Val	gac Asp	tgg Trp 6180	atg Met	tac Tyr	caa Gln	gct Ala	cgc Arg 6185	aat Asn	att Ile	att Ile	gac Asp	38939
tcc Ser 6190	cat His	cca Pro	cta Leu	agt Ser	gtg Val 6195	cgt Arg	ata Ile	gac Asp	ggt Gly	acc Thr 6200	ggc Gly	ccc Pro	ctg Leu	cat His	38984
act Thr 6205	tat Tyr	aaa Lys	gat Asp	agg Arg	gtg Val 6210	gat Asp	aaa Lys	ctt Leu	tat Tyr	gcg Ala 6215	tta Leu	cga Arg	act Thr	aaa Lys	39029
tta Leu 6220	gat Asp	ctc Leu	cta Leu	cga Arg	cga Arg 6225	cga Arg	ata Ile	gaa Glu	acc Thr	ggt Gly 6230	gag Glu	gtt Val	acg Thr	tgg Trp	39074

gac Asp 6235	gat Asp	gca Ala	tgg Trp	aca Thr	aca Thr 6240	ttt Phe	aaa Lys	aga Arg	gaa Glu	acg Thr 6245	ggg Gly	gat Asp	atg Met	ttg Leu	39119
gca Ala 6250	tcg Ser	ggg Gly	gac Asp	acg Thr	tac Tyr 6255	gct Ala	act Thr	tcc Ser	gta Val	gat Asp 6260	agt Ser	ata Ile	aag Lys	gca Ala	39164
ctc Leu 6265	cag Gln	gca Ala	tcg Ser	gcg Ala	tct Ser 6270	gtg Val	gtt Val	gac Asp	atg Met	ctt Leu 6275	tgt Cys	tcc Ser	gaa Glu	ccc Pro	39209
gaa Glu 6280	ttt Phe	ttt Phe	tta Leu	ttg Leu	cct Pro 6285	gtg Val	gaa Glu	acg Thr	aaa Lys	aac Asn 6290	cgt Arg	ctc Leu	caa Gln	aaa Lys	39254
aag Lys 6295	caa Gln	cag Gln	gaa Glu	cgt Arg	aaa Lys 6300	acg Thr	gcg Ala	ttg Leu	gat Asp	gtt Val 6305	gtg Val	ttg Leu	caa Gln	aaa Lys	39299
caa Gln 6310	aga Arg	cag Gln	ttt Phe	gaa Glu	gag Glu 6315	acc Thr	gcg Ala	tct Ser	cgc Arg	tta Leu 6320	cga Arg	gct Ala	tta Leu	att Ile	39344
gaa Glu 6325	cgt Arg	att Ile	cca Pro	acg Thr	gag Glu 6330	agt Ser	gac Asp	cat His	gac Asp	gtt Val 6335	ctt Leu	cgt Arg	atg Met	tta Leu	39389
tta Leu 6340	cgt Arg	gat Asp	ttc Phe	gat Asp	caa Gln 6345	ttt Phe	aca Thr	cat His	ttg Leu	cct Pro 6350	ata Ile	tgg Trp	ata Ile	aaa Lys	39434
aca Thr 6355	cag Gln	tat Tyr	atg Met	aca Thr	ttt Phe 6360	cga Arg	aat Asn	tta Leu	ctc Leu	atg Met 6365	gta Val	cgg Arg	tta Leu	ggc Gly	39479
ttg Leu 6370	tat Tyr	gca Ala	agt Ser	tat Tyr	gct Ala 6375	gag Glu	att Ile	ttt Phe	cca Pro	ccc Pro 6380	gcg Ala	tct Ser	cca Pro	aac Asn	39524
gga Gly 6385	gta Val	ttt Phe	gct Ala	cct Pro	att Ile 6390	ccc Pro	gcc Ala	atg Met	tcg Ser	ggc Gly 6395	gta Val	tgt Cys	cta Leu	gaa Glu	39569
gac Asp 6400	caa Gln	tcc Ser	cga Arg	tgc Cys	att Ile 6405	cgc Arg	gcg Ala	cgg Arg	gtg Val	gcc Ala 6410	gcg Ala	ttt Phe	atg Met	ggg Gly	39614
gag Glu 6415	gcg Ala	tct Ser	gtg Val	gtg Val	caa Gln 6420	acg Thr	ttt Phe	agg Arg	gaa Glu	gcc Ala 6425	aga Arg	tct Ser	tct Ser	ata Ile	39659
gac Asp 6430	gct Ala	ttg Leu	ttt Phe	gga Gly	aaa Lys 6435	aat Asn	tta Leu	acc Thr	ttt Phe	tac Tyr 6440	ttg Leu	gat Asp	act Thr	gat Asp	39704
ggg Gly 6445	gtt Val	cca Pro	ctt Leu	cga Arg	tat Tyr 6450	aga Arg	gtg Val	tgt Cys	tat Tyr	aaa Lys 6455	tca Ser	gtt Val	ggg Gly	gtt Val	39749

aaa Lys 6460	ctt Leu	gga Gly	acc Thr	atg Met	cta Leu 6465	tgc Cys	agt Ser	cag Gln	ggt Gly	gga Gly 6470	tta Leu	tct Ser	tta Leu	cga Arg	39794
ccg Pro 6475	gca Ala	ctt Leu	ccc Pro	gat Asp	gaa Glu 6480	ggt Gly	att Ile	gtg Val	gaa Glu	gaa Glu 6485	act Thr	aca Thr	cta Leu	tcg Ser	39839
gca Ala 6490	tta Leu	cgc Arg	gtg Val	gcc Ala	aat Asn 6495	gag Glu	gtc Val	aat Asn	gag Glu	cta Leu 6500	cgc Arg	att Ile	gaa Glu	tac Tyr	39884
gaa Glu 6505	tcc Ser	gct Ala	ata Ile	aaa Lys	tcc Ser 6510	ggg Gly	ttt Phe	tct Ser	gcc Ala	ttt Phe 6515	tcc Ser	acc Thr	ttt Phe	gtt Val	39929
agg Arg 6520	cat His	cgc Arg	cac His	gcc Ala	gaa Glu 6525	tgg Trp	ggt Gly	aaa Lys	acc Thr	aac Asn 6530	gca Ala	cgc Arg	aga Arg	gcc Ala	39974
att Ile 6535	gca Ala	gag Glu	ata Ile	tac Tyr	gcc Ala 6540	ggc Gly	ctt Leu	ata Ile	aca Thr	aca Thr 6545	aca Thr	ttg Leu	aca Thr	cga Arg	40019
caa Gln 6550	tac Tyr	ggg Gly	gtt Val	cat His	tgg Trp 6555	gac Asp	aag Lys	ctt Leu	att Ile	tat Tyr 6560	tct Ser	ttt Phe	gaa Glu	aaa Lys	40064
cac His 6565	cac His	cta Leu	act Thr	tct Ser	gta Val 6570	atg Met	ggc Gly	aat Asn	gga Gly	cta Leu 6575	act Thr	aaa Lys	cca Pro	atc Ile	40109
cag Gln 6580	aga Arg	agg Arg	ggt Gly	gat Asp	gta Val 6585	cgc Arg	gta Val	tta Leu	gag Glu	tta Leu 6590	acc Thr	cta Leu	tct Ser	gat Asp	40154
att Ile 6595	gta Val	act Thr	att Ile	ttg Leu	gtt Val 6600	gcc Ala	aca Thr	acc Thr	ccg Pro	gta Val 6605	cat His	ctt Leu	ctc Leu	aat Asn	40199
ttt Phe 6610	gct Ala	aga Arg	ttg Leu	gat Asp	tta Leu 6615	att Ile	aaa Lys	cag Gln	cat His	gag Glu 6620	tat Tyr	atg Met	gcc Ala	cgt Arg	40244
acc Thr 6625	ctc Leu	aga Arg	ccc Pro	gta Val	atc Ile 6630	gag Glu	gcc Ala	gca Ala	ttt Phe	aga Arg 6635	ggt Gly	cgt Arg	tta Leu	ctc Leu	40289
gtt Val 6640	cgc Arg	tca Ser	ttg Leu	gat Asp	gga Gly 6645	gac Asp	ccg Pro	aaa Lys	ggc Gly	aat Asn 6650	gcc Ala	cgg Arg	gcc Ala	ttt Phe	40334
ttt Phe 6655	aat Asn	gcc Ala	gcc Ala	cca Pro	tcc Ser 6660	aaa Lys	cat His	aaa Lys	ctc Leu	ccg Pro 6665	tta Leu	gct Ala	ctt Leu	gga Gly	40379
tca Ser 6670	aac Asn	caa Gln	gat Asp	cct Pro	acc Thr 6675	ggc Gly	ggg Gly	aga Arg	ata Ile	ttt Phe 6680	gca Ala	ttt Phe	cgg Arg	atg Met	40424

gca Ala 6685	gat Asp	tgg Trp	aaa Lys	ctt Leu	gtt Val 6690	aaa Lys	atg Met	cca Pro	cag Gln	aaa Lys 6695	ata Ile	acg Thr	gat Asp	cct Pro	40469
ttt Phe 6700	gcg Ala	cca Pro	tgg Trp	caa Gln	ctt Leu 6705	tcc Ser	ccc Pro	ccc Pro	ccc Pro	ggg Gly 6710	gta Val	aag Lys	gcc Ala	aat Asn	40514
gtc Val 6715	gat Asp	gca Ala	gtt Val	acc Thr	cgt Arg 6720	ata Ile	atg Met	gca Ala	aca Thr	gat Asp 6725	cgt Arg	ctt Leu	gcg Ala	acc Thr	40559
att Ile 6730	act Thr	gta Val	ctt Leu	ggg Gly	cgc Arg 6735	atg Met	tgt Cys	ctc Leu	ccg Pro	cca Pro 6740	att Ile	tcc Ser	tta Leu	gtg Val	40604
tca Ser 6745	atg Met	tgg Trp	aat Asn	acg Thr	ctg Leu 6750	caa Gln	ccg Pro	gag Glu	gaa Glu	ttc Phe 6755	gca Ala	tac Tyr	aga Arg	aca Thr	40649
caa Gln 6760	gat Asp	gat Asp	gtg Val	gac Asp	att Ile 6765	ata Ile	gtt Val	gat Asp	gcg Ala	aga Arg 6770	ctg Leu	gat Asp	ttg Leu	tca Ser	40694
tcc Ser 6775	acg Thr	ctt Leu	aat Asn	gca Ala	aga Arg 6780	ttt Phe	gat Asp	acc Thr	gct Ala	ccc Pro 6785	agc Ser	aat Asn	acc Thr	acg Thr	40739
tta Leu 6790	gag Glu	tgg Trp	aat Asn	aca Thr	gac Asp 6795	cgt Arg	aaa Lys	gta Val	att Ile	aca Thr 6800	gat Asp	gct Ala	tat Tyr	att Ile	40784
caa Gln 6805	acc Thr	ggg Gly	gca Ala	acg Thr	aca Thr 6810	gtt Val	ttt Phe	aca Thr	gta Val	acg Thr 6815	ggg Gly	gcg Ala	gca Ala	cca Pro	40829
act Thr 6820	cac His	gtt Val	tct Ser	aat Asn	gta Val 6825	aca Thr	gcg Ala	ttt Phe	gac Asp	ata Ile 6830	gca Ala	act Thr	acg Thr	gct Ala	40874
att Ile 6835	tta Leu	ttt Phe	ggg Gly	gct Ala	cct Pro 6840	ttg Leu	gtt Val	att Ile	gcc Ala	atg Met 6845	gaa Glu	ctt Leu	aca Thr	tcc Ser	40919
gtt Val 6850	ttt Phe	tca Ser	caa Gln	aat Asn	tcc Ser 6855	gga Gly	ctt Leu	act Thr	ttg Leu	ggg Gly 6860	tta Leu	aaa Lys	tta Leu	ttc Phe	40964
gat Asp 6865	tcc Ser	cgg Arg	cat His	atg Met	gct Ala 6870	aca Thr	gat Asp	tcg Ser	ggt Gly	ata Ile 6875	tcc Ser	tca Ser	gcc Ala	gta Val	41009
tct Ser 6880	ccc Pro	gat Asp	att Ile	gtt Val	tct Ser 6885	tgg Trp	ggg Gly	tta Leu	cgt Arg	tta Leu 6890	ctg Leu	cat His	atg Met	gat Asp	41054
cct Pro 6895	cac His	cca Pro	att Ile	gaa Glu	aat Asn 6900	gca Ala	tgt Cys	tta Leu	att Ile	gtc Val 6905	caa Gln	cta Leu	gaa Glu	aaa Lys	41099

ctg Leu 6910	tcc Ser	gcg Ala	ctc Leu	att Ile	gca Ala 6915	aac Asn	aaa Lys	cct Pro	ctt Leu	aca Thr 6920	aac Asn	aat Asn	ccc Pro	ccg Pro	41144
tgt Cys 6925	tta Leu	ctg Leu	cta Leu	ttg Leu	gac Asp 6930	gaa Glu	cat His	atg Met	aat Asn	ccc Pro 6935	tct Ser	tat Tyr	gtt Val	tta Leu	41189
tgg Trp 6940	gaa Glu	cga Arg	aaa Lys	gac Asp	tcg Ser 6945	att Ile	cca Pro	gct Ala	ccg Pro	gat Asp 6950	tat Tyr	gtg Val	gtc Val	ttt Phe	41234
tgg Trp 6955	ggg Gly	cca Pro	gaa Glu	tct Ser	ctt Leu 6960	att Ile	gat Asp	ttg Leu	ccg Pro	tac Tyr 6965	atc Ile	gac Asp	tcc Ser	gat Asp	41279
gag Glu 6970	gac Asp	tct Ser	ttc Phe	ccc Pro	tcg Ser 6975	tgt Cys	ccc Pro	gat Asp	gat Asp	cca Pro 6980	ttt Phe	tac Tyr	tcg Ser	caa Gln	41324
att Ile 6985	att Ile	gcc Ala	ggt Gly	tat Tyr	gcg Ala 6990	ccc Pro	caa Gln	ggc Gly	ccc Pro	cca Pro 6995	aac Asn	ctc Leu	gac Asp	aca Thr	41369
act Thr 7000	gat Asp	ttt Phe	tac Tyr	cca Pro	acg Thr 7005	gag Glu	cca Pro	cta Leu	ttt Phe	aag Lys 7010	tct Ser	ccc Pro	gtt Val	caa Gln	41414
gtt Val 7015	gtt Val	aga Arg	agt Ser	tcc Ser	aaa Lys 7020	tgt Cys	aaa Lys	aaa Lys	atg Met	ccc Pro 7025	gtc Val	cgg Arg	ccc Pro	gcg Ala	41459
cag Gln 7030	ccc Pro	gcg Ala	cag Gln	ccc Pro	gcg Ala 7035	cag Gln	ccc Pro	gcg Ala	cag Gln	ccc Pro 7040	gcg Ala	cag Gln	acc Thr	gtc Val	41504
cag Gln 7045	ccc Pro	gcg Ala	cag Gln	ccc Pro	ata Ile 7050	gaa Glu	ccg Pro	ggc Gly	aca Thr	caa Gln 7055	ata Ile	gtg Val	gta Val	caa Gln	41549
aat Asn 7060	ttt Phe	aag Lys	aaa Lys	ccc Pro	caa Gln 7065	agc Ser	gta Val	aaa Lys	aca Thr	acc Thr 7070	ctt Leu	agc Ser	caa Gln	aaa Lys	41594
gat Asp 7075	att Ile	ccc Pro	ttg Leu	tat Tyr	gtg Val 7080	gaa Glu	acc Thr	gaa Glu	tca Ser	gaa Glu 7085	acg Thr	gct Ala	gtg Val	ctt Leu	41639
ata Ile 7090	cct Pro	aag Lys	caa Gln	tta Leu	acc Thr 7095	acc Thr	tcc Ser	att Ile	aaa Lys	aca Thr 7100	acc Thr	gtt Val	tgt Cys	aaa Lys	41684
agt Ser 7105	att Ile	acc Thr	cca Pro	cca Pro	aat Asn 7110	aac Asn	caa Gln	ttg Leu	tcg Ser	gat Asp 7115	tgg Trp	aaa Lys	aat Asn	aat Asn	41729
cca Pro 7120	cag Gln	caa Gln	aac Asn	caa Gln	acg Thr 7125	tta Leu	aac Asn	caa Gln	gcg Ala	ttc Phe 7130	agt Ser	aaa Lys	cca Pro	ata Ile	41774

ctt	gag	att	acc	tcc	att	ccg	aca	gat	gac	tcg	ata	tct	tac	cgg	41819
Leu	Glu	Ile	Thr	Ser	Ile	Pro	Thr	Asp	Asp	Ser	Ile	Ser	Tyr	Arg	
7135					7140					7145					
act	tgg	att	gaa	aaa	tca	aat	caa	aca	caa	aaa	cgg	cat	caa	aat	41864
Thr	Trp	Ile	Glu	Lys	Ser	Asn	Gln	Thr	Gln	Lys	Arg	His	Gln	Asn	
7150					7155					7160					
gac	cct	cga	atg	tat	aac	tcc	aaa	aca	gta	ttc	cac	cct	gta	aat	41909
Asp	Pro	Arg	Met	Tyr	Asn	Ser	Lys	Thr	Val	Phe	His	Pro	Val	Asn	
7165					7170					7175					
aac	caa	tta	cct	tct	tgg	gtt	gac	acg	gca	gcc	gat	gcc	ccc	caa	41954
Asn	Gln	Leu	Pro	Ser	Trp	Val	Asp	Thr	Ala	Ala	Asp	Ala	Pro	Gln	
7180					7185					7190					
acg	gac	cta	ttg	aca	aac	tat	aaa	aca	aga	cag	ccg	tcg	cca	aac	41999
Thr	Asp	Leu	Leu	Thr	Asn	Tyr	Lys	Thr	Arg	Gln	Pro	Ser	Pro	Asn	
7195					7200					7205					
ttt	ccg	cgg	gac	gta	cac	aca	tgg	ggc	gta	tct	tct	aac	ccg	ttt	42044
Phe	Pro	Arg	Asp	Val	His	Thr	Trp	Gly	Val	Ser	Ser	Asn	Pro	Phe	
7210					7215					7220					
aac	tca	ccg	aac	aga	gac	cta	tat	caa	agt	gat	ttt	agt	gaa	cct	42089
Asn	Ser	Pro	Asn	Arg	Asp	Leu	Tyr	Gln	Ser	Asp	Phe	Ser	Glu	Pro	
7225					7230					7235					
tct	gac	ggc	tat	agc	agt	gag	agt	gaa	aat	tct	atc	gta	cta	agt	42134
Ser	Asp	Gly	Tyr	Ser	Ser	Glu	Ser	Glu	Asn	Ser	Ile	Val	Leu	Ser	
7240					7245					7250					
ctc	gac	gaa	cat	cgg	tca	tgt	cgc	gtt	cct	agg	cac	gta	cgc	gtt	42179
Leu	Asp	Glu	His	Arg	Ser	Cys	Arg	Val	Pro	Arg	His	Val	Arg	Val	
7255					7260					7265					
gtt	aat	gcc	gat	gta	gtc	acc	ggc	cga	cgt	tat	gtc	cga	ggg	acc	42224
Val	Asn	Ala	Asp	Val	Val	Thr	Gly	Arg	Arg	Tyr	Val	Arg	Gly	Thr	
7270					7275					7280					
gcc	ttg	gga	gca	ctg	gca	ctg	tta	agc	cag	gca	tgt	cgg	cgt	atg	42269
Ala	Leu	Gly	Ala	Leu	Ala	Leu	Leu	Ser	Gln	Ala	Cys	Arg	Arg	Met	
7285					7290					7295					
atc	gac	aac	gtt	aga	tat	aca	cgt	aaa	ctt	tta	atg	gac	cac	acg	42314
Ile	Asp	Asn	Val	Arg	Tyr	Thr	Arg	Lys	Leu	Leu	Met	Asp	His	Thr	
7300					7305					7310					
gaa	gat	ata	ttt	caa	ggc	ctg	ggg	tat	gtt	aaa	ttg	tta	tta	gat	42359
Glu	Asp	Ile	Phe	Gln	Gly	Leu	Gly	Tyr	Val	Lys	Leu	Leu	Leu	Asp	
7315					7320					7325					
gga	aca	tat	ata	taa	agtagcgcct	attaaagaaa	aaaaaaaaaac	aacgattatt							42414
Gly	Thr	Tyr	Ile												
7330															
ttctgtgtat	ttttatttac	accctacgac	ttcttgaagc	gtttccagat	tgtcccgtgt										42474
gtgacaaggt	ctgtccctta	ccccctggg	gggtattttg	ggttgggggc	ggggtagact										42534

gtggcacgcc	ttggggccgcg	ggcgggtgatc	cggttgttgg	ctggacagtg	cttgactgtg	42594
ctccctgttg	cggttgttgt	ccagaagacc	ccgacaccac	gtgttgctgt	tgtccaacgg	42654
atgccgacgt	cgtttgaggt	gggggggtgtt	gcgggggatga	tcccgaaaac	gccaacgcgg	42714
cgggctgttg	taaagcagac	tgatcggcgc	tctgtgtttt	ttgcggcaat	atagtaggcc	42774
ccgagattcc	caaactcatg	gatggatttg	ggggttgtgg	tcgtataata	cgcgggttaa	42834
acgtacgttt	taagccaacc	gttggtctta	accatgtcat	agggtcagtc	tcggcaaaca	42894
tggccgttcg	gcgtatcgta	tttgcatatat	ggttagcgcg	tgcacgcgcg	gcactggccg	42954
cggctcccac	ggtgtaaatg	cttctggcat	cagcgatgtc	cacacgggtga	ccagggttgca	43014
aaggteccact	ggcgttttaa	agtcgtatta	aagcaacggg	ggtgtaaagg	gcaattgctt	43074
ccaccgaaaa	tgtgggtggg	ttgctgggat	caaagactac	acgagacgat	gcgggttgtg	43134
tcacgtttta	ttagtttacg	ggacaatcga	taacagcata	cacgtacatc	tgcgcaggat	43194
atgtacggaa	aggcaattta	tttccagaaa	agcaccgccc	ctaatacaac	taccagtaca	43254
attacaatga	acagggcata	tgtcacgtta	gctacgggta	gagcaagttt	ccagacacgc	43314
gtagtttggg	tatcgggtaa	cgcaggttta	atgtcacttt	gcatttgaac	agacgtgttt	43374
ggacttccgt	tctcgggtgg	ggatctgaat	gaaggccgcc	agcgtatata	ttcatccaaa	43434
ttattgccag	tttccttata	catgtatgca	tccgtggcgc	gggccataag	tttaatgggtg	43494
cgagatggat	cttccggtcc	cataaaacga	aaggataact	gaacatatgg	cattcgcaca	43554
aagcagttca	cccacattaa	agcctggaga	ggtcggcggt	caataccccc	acctcgttta	43614
attgattcca	aagcagatag	gttgataccg	gtacttaacg	ttgaactaag	aatcacgtta	43674
ttactgtcaa	tggacacttc	agccactggg	gcgttagtcg	gacgaaaaaa	aaaaccttga	43734
aatagcacag	acacccccgt	attttgaatt	tttatgtaag	ggtcacaatc	tacttgcgcc	43794
caattcgcca	ttaaacgcat	aatatactct	accggaaagg	cttcggatac	gttgtcttcg	43854
ccgttaaact	gaaaaacaca	acgggcgggg	gggcgttgtg	gatcaaatat	tggaagatcc	43914
ccatcgcaac	attgaagagc	gcttggtacc	accaaccgaa	tacgttgtaa	aagattatct	43974
ccgcaacccc	tcctgcgttc	actccgtaca	tacgttctcc	gtgacatatt	gatctaaggt	44034
tgcaaaccac	ggcacacgcg	tgaagtattt	agaccattta	tcgtgggata	taggaggagt	44094
ttggagtgat	ccacccctg	acgacttatt	aatgcgttta	ttttcccat	gtattaagca	44154
tccttcaata	tttcatgcaa	atctagaaat	ttggccatga	ctcccgcaaa	gcgttcacgg	44214
cgacgggtca	cgctggcact	atgttcacat	ggaacaacat	aagcagattt	ttctgaatcg	44274
ttactttctt	tatgttttaa	aacggacgcc	aggcgactgg	taaatgatat	ataatttaat	44334

tgagcgtcag ttgtaggtag aattgcttct atttccgggg gaattaaatt ttcaaaccaa	44394
acggaaagag taaaggtgct atcagcagga aaatactttg actccagtgc atcgatatatt	44454
aatagattaa catcggtgct tgtaattaaa tcgcggggccc tcatcccaga g atg gat	44511
	Met Asp
	7335
cggtgtacgaa tca gaa gaa ccc atg gat gga ttc gaa tcg ccc gta	44556
Arg Val Glu Ser Glu Glu Pro Met Asp Gly Phe Glu Ser Pro Val	
	7340 7345 7350
ttc tcc gaa aat aca tct tct aat tcc gga tgg tgt tcc gac gca	44601
Phe Ser Glu Asn Thr Ser Ser Asn Ser Gly Trp Cys Ser Asp Ala	
	7355 7360 7365
ttt tcc gat tcg tac atc gct tat aat cca gcc ctt ctg cta aaa	44646
Phe Ser Asp Ser Tyr Ile Ala Tyr Asn Pro Ala Leu Leu Leu Lys	
	7370 7375 7380
aac gat ttg tta ttt tca gaa ttg tta ttt gcc tcc cac tta ata	44691
Asn Asp Leu Leu Phe Ser Glu Leu Leu Phe Ala Ser His Leu Ile	
	7385 7390 7395
aat gtt ccc cgt gca ata gaa aac aac gtc act tat gag gcc tct	44736
Asn Val Pro Arg Ala Ile Glu Asn Asn Val Thr Tyr Glu Ala Ser	
	7400 7405 7410
tcg gcg gta ggt gtg gat aat gaa atg acc tca agt acc act gaa	44781
Ser Ala Val Gly Val Asp Asn Glu Met Thr Ser Ser Thr Thr Glu	
	7415 7420 7425
ttt ata gaa gaa att gga gac gtt ttg gcg tta gac aga gcc tgt	44826
Phe Ile Glu Glu Ile Gly Asp Val Leu Ala Leu Asp Arg Ala Cys	
	7430 7435 7440
ttg gtc tgc aga acg ctt gat ttg tat aaa cgt aaa ttt gga ctg	44871
Leu Val Cys Arg Thr Leu Asp Leu Tyr Lys Arg Lys Phe Gly Leu	
	7445 7450 7455
aca ccg gaa tgg gtt gcg gac tac gcc atg tta tgt atg aaa agt	44916
Thr Pro Glu Trp Val Ala Asp Tyr Ala Met Leu Cys Met Lys Ser	
	7460 7465 7470
ctg gca tcc ccg ccc tgt gca gtt gtc act ttt agc gct gcc ttt	44961
Leu Ala Ser Pro Pro Cys Ala Val Val Thr Phe Ser Ala Ala Phe	
	7475 7480 7485
gaa ttt gtg tat ctt atg gat cgt tac tac ctg tgc cgt tat aac	45006
Glu Phe Val Tyr Leu Met Asp Arg Tyr Tyr Leu Cys Arg Tyr Asn	
	7490 7495 7500
gtt act ttg gtt ggg tcc ttt gcc agg cgc acg ctt tcc ctg tta	45051
Val Thr Leu Val Gly Ser Phe Ala Arg Arg Thr Leu Ser Leu Leu	
	7505 7510 7515
gat ata caa aga cat ttt ttt ttg cat gta tgt ttt cgt acc gat	45096
Asp Ile Gln Arg His Phe Phe Leu His Val Cys Phe Arg Thr Asp	
	7520 7525 7530

gga ggg tta cca ggt Gly Gly Leu Pro Gly 7535	ata cga ccg ccc ccc Ile Arg Pro Pro Pro 7540	ggt aag gaa atg gcc Gly Lys Glu Met Ala 7545	45141
aac aaa gta aga tat Asn Lys Val Arg Tyr 7550	tcc aat tac tcc ttt Ser Asn Tyr Ser Phe 7555	ttt gta cag gcg gta Phe Val Gln Ala Val 7560	45186
gtt agg gct gca tta Val Arg Ala Ala Leu 7565	cta tcg atc agc acg Leu Ser Ile Ser Thr 7570	tct cgt tta gac gaa Ser Arg Leu Asp Glu 7575	45231
acc gaa acg cgt aag Thr Glu Thr Arg Lys 7580	tca ttt tac ttt aat Ser Phe Tyr Phe Asn 7585	cag gac gga ctg act Gln Asp Gly Leu Thr 7590	45276
gga ggc cct caa cct Gly Gly Pro Gln Pro 7595	tta gcg gcc gcc ttg Leu Ala Ala Ala Leu 7600	gct aat tgg aaa gat Ala Asn Trp Lys Asp 7605	45321
tgc gcg cgg atg gtt Cys Ala Arg Met Val 7610	gac tgt tca tca tcg Asp Cys Ser Ser Ser 7615	gaa cat cgc aca agt Glu His Arg Thr Ser 7620	45366
ggg atg att acc tgc Gly Met Ile Thr Cys 7625	gcg gaa cgt gca tta Ala Glu Arg Ala Leu 7630	aaa gag gat ata gag Lys Glu Asp Ile Glu 7635	45411
ttt gaa gat ata tta Phe Glu Asp Ile Leu 7640	ata gac aaa ctt aaa Ile Asp Lys Leu Lys 7645	aaa tcg tct tac gta Lys Ser Ser Tyr Val 7650	45456
gaa gca gct tgg ggt Glu Ala Ala Trp Gly 7655	tac gca gac ttg gct Tyr Ala Asp Leu Ala 7660	tta tta tta ctg agt Leu Leu Leu Leu Ser 7665	45501
ggg gtt gct act tgg Gly Val Ala Thr Trp 7670	aat gta gac gag cgt Asn Val Asp Glu Arg 7675	aca aat tgt gct ata Thr Asn Cys Ala Ile 7680	45546
gaa act cgc gtt gga Glu Thr Arg Val Gly 7685	tgt gtt aaa tca tac Cys Val Lys Ser Tyr 7690	tgg cag gcg aac cgg Trp Gln Ala Asn Arg 7695	45591
att gaa aac tcc agg Ile Glu Asn Ser Arg 7700	gac gtt cca aaa caa Asp Val Pro Lys Gln 7705	ttt tcc aaa ttt acg Phe Ser Lys Phe Thr 7710	45636
agc gag gat gcc tgt Ser Glu Asp Ala Cys 7715	ccc gaa gta gca ttt Pro Glu Val Ala Phe 7720	ggg cct att ttg tta Gly Pro Ile Leu Leu 7725	45681
act acc tta aaa aac Thr Thr Leu Lys Asn 7730	gca aag tgc cgt ggt Ala Lys Cys Arg Gly 7735	cgc acg aat acc gaa Arg Thr Asn Thr Glu 7740	45726
tgc atg tta tgt tgt Cys Met Leu Cys Cys 7745	tta tta acc ata ggg Leu Leu Thr Ile Gly 7750	cac tat tgg atc gct His Tyr Trp Ile Ala 7755	45771

ttg cgg cag ttt aaa agg gat ata tta gca tac tca gca aat aac	45816
Leu Arg Gln Phe Lys Arg Asp Ile Leu Ala Tyr Ser Ala Asn Asn	
7760 7765 7770	
aca agt tta ttt gac tgt atc gaa cct gta atc aat gca tgg agc	45861
Thr Ser Leu Phe Asp Cys Ile Glu Pro Val Ile Asn Ala Trp Ser	
7775 7780 7785	
cta gat aac ccc att aaa ctt aaa ttt cca ttt aat gat gag ggt	45906
Leu Asp Asn Pro Ile Lys Leu Lys Phe Pro Phe Asn Asp Glu Gly	
7790 7795 7800	
cga ttc ata acc att gta aaa gca gca ggt tcc gag gcc gta tat	45951
Arg Phe Ile Thr Ile Val Lys Ala Ala Gly Ser Glu Ala Val Tyr	
7805 7810 7815	
aaa cat tta ttt tgc gat ctc cta tgc gct ctc tcg gaa tta cag	45996
Lys His Leu Phe Cys Asp Leu Leu Cys Ala Leu Ser Glu Leu Gln	
7820 7825 7830	
aca aac cct aaa att tta ttt gcc cat cct aca acc gcg gat aag	46041
Thr Asn Pro Lys Ile Leu Phe Ala His Pro Thr Thr Ala Asp Lys	
7835 7840 7845	
gaa gtg ttg gag tta tat aaa gcc caa ctg gct gca caa aac aga	46086
Glu Val Leu Glu Leu Tyr Lys Ala Gln Leu Ala Ala Gln Asn Arg	
7850 7855 7860	
ttt gaa ggt cgt gta tgt gct ggc ctg tgg aca ttg gcg tat gca	46131
Phe Glu Gly Arg Val Cys Ala Gly Leu Trp Thr Leu Ala Tyr Ala	
7865 7870 7875	
ttt aaa gcc tac cag att ttt cca cgc aaa cca acc gcc aat gcc	46176
Phe Lys Ala Tyr Gln Ile Phe Pro Arg Lys Pro Thr Ala Asn Ala	
7880 7885 7890	
gca ttc ata cga gat gga gga ctt atg ctt cga cga cat gca ata	46221
Ala Phe Ile Arg Asp Gly Gly Leu Met Leu Arg Arg His Ala Ile	
7895 7900 7905	
tcg ctg gtc tcc ctc gaa cac acc cta tcg aag tat gtc tag	46263
Ser Leu Val Ser Leu Glu His Thr Leu Ser Lys Tyr Val	
7910 7915	
gcgatataaaa tccgtatctc ggagcgggcc ttcgatgcgt gtacgctcca gaacgccatg	46323
ccgccgtcaa accattcgag gaaaacttat gtcaaaggag cggctctgtgt accgccatta	46383
ttttaattac atcgcaaggt cccccccaga agaactagct accgttagag gcttaatcgt	46443
gccaattatt aagacgaccc ctgtcaccct tccgtttaac ttgggtcaga cagtggcgga	46503
taactgcctg tcgttatccg gaatgggtta tcatttaggt ctcgagggtt attgtccgac	46563
atgcactgca tctggagaac cgcgtctatg tcgaaccgat cgggcggctc tgatactagc	46623
atatgttcag cagcttaaca acatatacga atatcgtgtg tttcttgcac ccattttggc	46683
gctatcagac cgagccaaca tgcaagcagc gtccgctgaa cccctattgt cgagcgtatt	46743

ggcacaaccg	gaattatattt	ttatgtatca	tattatgagg	gaggggggca	tgcgagatat	46803
acgcgtactt	ttttatcgtg	atggagatgc	cggagggttt	atgatgtatg	ttatatattcc	46863
ggggaaatct	gttcacctcc	attacagact	aatcgatcat	atacaggccg	cgtgtcgggg	46923
gtataaaata	gtcgcacacg	tttggcagac	aacattttta	ctgtcgggtat	gtcgcacccc	46983
agaacaacaa	acagagactg	tggtgccatc	cattggaaca	tcggacgttt	actgtaaaat	47043
gtgtgacctt	aactttgatg	gagaattgct	tttgggaatac	aaaagactct	acgcattatt	47103
tgatgacttt	gttcctcctc	ggtgatttca	gcttcagtgt	tcatttttatt	atcccagcac	47163
ggggcgtgta	tacaaacaaa	gcctgccgcc	tgcaagcggg	ttagcatttt	aacgttaaca	47223
actcgtgtct	ctggaataaa	acgtttttaa	agccgttctg	tgagttagt	gtcgtttcca	47283
aataacgcct	taaaagttac	actcgccgct	ccaatgagat	gagaaaaata	atagtcaatg	47343
tttaaagaca	gcccgtgtga	tgttacgtga	atgggatctt	ccgctaagtc	agatattatt	47403
aacttacgct	ttgcttcccc	acaccgttta	cctgcgggtat	tctgtaaagg	atctccacgt	47463
agcaaagcta	cactttttgc	atcagcctcc	acttcgtctg	tggggggccac	aataacataa	47523
gggatgcgtt	ctcgaacggt	tgggatttga	ccctgtctca	ttactaattt	ataatatact	47583
gttaagttag	ccaagcgacg	gtttatgtag	gcggatgggt	gacgactaag	ctcggccgct	47643
ataacaaact	tattaatatc	caatttgggt	gatgtaatct	ggcgatgtgc	atctgcaatt	47703
atgcgtccaa	acccggccat	cccagacggc	atggcccgtc	tattccattc	agcaatggaa	47763
acacacgacg	cctccgcccgc	agcacgcgag	acggtgtcgt	catataacaa	cagttctaca	47823
agtttgcggg	cataatcgtt	aataaattga	cagttgtttt	ttctaaccac	gtcgactccc	47883
ttcattaaaa	cctttccgcc	gtaaattacc	ccaatgtact	ttttctttgt	tataagcaaa	47943
agttttataa	aagttttttc	acactccaac	tttataggag	gacaaaacag	agccgttgaa	48003
attatatgtg	ccattttctc	gccgatttta	gctatccccct	caacactaac	acccttgaat	48063
cggataaaca	cagaatccgt	atctccatat	ataaccttta	cctcgtacgc	tttttgggag	48123
agaacgctac	tttcaatgtc	tggaaacgct	gtaataaaac	gttcaaattgc	ggcccagtta	48183
ttatgaatat	aatctctggt	acttaataac	atttgacggc	caattgtagt	gacagtggcc	48243
gctacgtata	aacatggcag	aaatccctgc	gcaactccag	taaaaccgta	cacggaatta	48303
caaactactt	ttatcgcggc	ttgttggttg	tctaataaca	ctgcttcac	tgaagaactt	48363
ccgggtatgc	gcgctcta	agccttgccg	atagccaacc	agtcttttaa	aagaacaccc	48423
agcagacttt	ctcgaacggt	agagcgcaca	aaaaaaagac	gttttcctcc	aactgtaaag	48483
gtggcataat	cggatggatt	caaacgttta	accgtctcaa	aatttaacgt	tagcgtggta	48543

aaacataagt	tatgggcctg	aattatactt	ggatataaac	ttgcaaaatc	caatacgacc	48603
accggatcga	tataaaatcc	cgtatcaggg	tcaaaaaccc	tggctccttt	atatacctaca	48663
tttcgcccac	ttgacgtacc	agtgggagaa	acgctctcgt	cttcatccat	ctcttcctca	48723
acatccccga	catcgggaat	aacatcctta	tattcaaaag	tagctgggta	tcccccatcg	48783
ggtaaaataa	atcctcgaga	cgaagccagt	cctaataaac	aggtgtaaata	cctaacctgc	48843
tgtccgctcg	aaatagcctt	ggttaaagta	attctagcta	gccttgcaac	cgcggtataac	48903
tcaaggtgtg	gtaaatatatt	aaaaaacagt	ttccccacaa	gagccgagtc	ttgtatacaa	48963
tattcaccaa	taattcctcg	tgtattcggg	ccactagcgt	aatatcccgg	aatgtctttg	49023
tagggcaaat	ctctcttgga	ctcatttaga	gcttcacgtg	caaccgaatc	taatttataa	49083
ctcgagagtt	ttaatttttc	agttgcaatt	gcatacatat	ccagagatat	gagaccgttg	49143
atctttacct	tgcttcgctg	ctgaaatccg	gatttgccaa	catcccatat	cttaaacaga	49203
cccccacgg	ttatactgcc	ataaccatca	agcttgagac	tgtatataga	attaagtttc	49263
tccataataa	acgccaatc	aaaattaaca	atgttataac	ctgtggcaaa	ctcgggagcg	49323
tactgtttta	cgagggtcat	aatgcaatt	aatagctcga	attcactatc	aaactccagc	49383
acagtcggct	ccggtaaccc	cgcgctcttc	atttcttgta	catacctttg	tggttaagtca	49443
caagagccaa	gggaaaacag	taaaatgtgt	tctaaagact	gtcgagggat	tgaatataat	49503
agacaagaaa	tttggattac	aagatcctcc	agatgtgttg	catcgggaaa	cgccagctca	49563
ttagatcctc	ctgatttaca	ttcaatatcg	aaacataaca	acttgtagtc	aggccatgag	49623
tcacggtttg	gtatagcctg	cagattatcc	gacatgcagt	caatttcaac	gtcgcttaac	49683
gttaattggc	gacttgccgg	tcgaactcga	acacgttccc	catcaactcc	aggttttagt	49743
tgataccaac	caaaactaac	aaagccggga	ttatccatta	gaaaacgagt	ggtagcgtct	49803
acccgacctt	catacttttt	caactccggg	tgaaagttat	cacaaagata	atttgtaaata	49863
ttagatgagg	gagaatacac	cctgtaaaac	gcacatggct	gtgtatcgta	gtaataaaca	49923
tctgtgcgct	caataacctc	aacgcgaaag	ctttctggag	atgcgctttt	aaacgaggta	49983
ccatgaaaag	cggtcttggt	tccatttaac	gttgcatcat	tttgtgttat	catagaactg	50043
cgtaaacact	cggcaagtaa	tacagataac	tcgctaccgg	aacgtatgcc	acaagcggta	50103
tccacctcgg	ctttgtttat	ataaaaatat	tgacagatgc	cgtatacatg	aactgccacc	50163
ctttttccac	atcgggacat	gccaagtaaa	gtaataacgg	taccaagcgg	tcgtgttgca	50223
gttgcaaacc	gggatacatc	tccattagac	gcggcttctg	ttgtttcgac	aatatcatat	50283
acatggaatg	tggttaaagcg	ggggtcaaac	ttatccccac	gaaagtcgat	ttccccccaa	50343

atattcacgc	gtctaggcca	ggggctggaa	caacgaaaat	ccagaatcgg	aacttctttt	50403									
ccattacagt	aaactttagg	cggtcgacta	agtgtaccga	cgtgaacccc	ctttcgttct	50463									
tccatgggca	catcttcac	taaacattta	ggggccaaaa	attgaaacga	tgacatggta	50523									
gttttgtaac	tatgaagaaa	ttctctgtta	ctaccgcgcc	cggttcttgg	gttatattta	50583									
atccctgatg	cttgggttaa	aaagggatta	caaaaccccg	ttctgatcgc	cattttatgt	50643									
taacgattga	taatcttgta	aaaagccagt	gttactgagt	aacacaaccc	cacgcccttc	50703									
taatacataa	agtgtaatca	cgtgatttgt	tgtggtttcc	gcatatgtaa	taccggttta	50763									
aaagcctctc	ttcttaatgt	atcgacagac	tgggttttgg	gtggtcattt	gaccctgcca	50823									
acaaccccc	attattacga	gtacttcacc	aaa atg gaa	aat act cag aag		50874									
			Met Glu	Asn Thr Gln Lys		7920									
act	gtg	aca	gtg	ccc	acg	ggg	ccc	ctg	ggt	tac	gtt	tat	gcg	tgc	50919
Thr	Val	Thr	Val	Pro	Thr	Gly	Pro	Leu	Gly	Tyr	Val	Tyr	Ala	Cys	
7925					7930					7935					
cgg	gtt	gaa	gat	ttg	gat	ctg	gag	gaa	att	tca	ttt	ttg	gcc	gct	50964
Arg	Val	Glu	Asp	Leu	Asp	Leu	Glu	Glu	Ile	Ser	Phe	Leu	Ala	Ala	
7940					7945					7950					
cgt	agc	acg	gac	tct	gat	ttg	gct	tta	tta	cct	ttg	atg	cgt	aat	51009
Arg	Ser	Thr	Asp	Ser	Asp	Leu	Ala	Leu	Leu	Pro	Leu	Met	Arg	Asn	
7955					7960					7965					
ttg	acc	gtg	gaa	aaa	act	ttt	aca	tcc	agc	ctg	gcg	gtg	gtt	tct	51054
Leu	Thr	Val	Glu	Lys	Thr	Phe	Thr	Ser	Ser	Leu	Ala	Val	Val	Ser	
7970					7975					7980					
gga	gca	cgc	act	acg	ggt	ctt	gcc	gga	gct	ggt	att	acc	tta	aaa	51099
Gly	Ala	Arg	Thr	Thr	Gly	Leu	Ala	Gly	Ala	Gly	Ile	Thr	Leu	Lys	
7985					7990					7995					
ctc	act	acc	agt	cat	ttc	tat	cca	tct	gtc	ttt	gtc	ttt	cac	gga	51144
Leu	Thr	Thr	Ser	His	Phe	Tyr	Pro	Ser	Val	Phe	Val	Phe	His	Gly	
8000					8005					8010					
ggc	aaa	cac	gtt	tta	ccc	agc	tcc	gcg	gcc	cca	aat	ctc	aca	cgc	51189
Gly	Lys	His	Val	Leu	Pro	Ser	Ser	Ala	Ala	Pro	Asn	Leu	Thr	Arg	
8015					8020					8025					
gcg	tgt	aac	gcg	gct	cga	gaa	cgg	ttt	ggg	ttt	tca	cgc	tgc	caa	51234
Ala	Cys	Asn	Ala	Ala	Arg	Glu	Arg	Phe	Gly	Phe	Ser	Arg	Cys	Gln	
8030					8035					8040					
ggg	cct	cct	gtt	gac	ggt	gct	gtt	gag	acg	acc	ggc	gct	gag	ata	51279
Gly	Pro	Pro	Val	Asp	Gly	Ala	Val	Glu	Thr	Thr	Gly	Ala	Glu	Ile	
8045					8050					8055					
tgc	acc	cgc	ctt	gga	tta	gag	cca	gaa	aat	aca	ata	tta	tac	ttg	51324
Cys	Thr	Arg	Leu	Gly	Leu	Glu	Pro	Glu	Asn	Thr	Ile	Leu	Tyr	Leu	
8060					8065					8070					

gtg Val 8075	gtc Val	acg Thr	gca Ala	ttg Leu	ttt Phe 8080	aag Lys	gaa Glu	gcc Ala	gta Val	ttt Phe 8085	atg Met	tgc Cys	aac Asn	gtg Val	51369
ttt Phe 8090	ctg Leu	cat His	tat Tyr	gga Gly	gga Gly 8095	ctc Leu	gat Asp	att Ile	gtt Val	cat His 8100	att Ile	aac Asn	cat His	ggg Gly	51414
gat Asp 8105	gtt Val	ata Ile	cgt Arg	ata Ile	ccg Pro 8110	tta Leu	ttt Phe	ccg Pro	gta Val	caa Gln 8115	ctt Leu	ttc Phe	atg Met	ccc Pro	51459
gat Asp 8120	gtt Val	aac Asn	cgt Arg	ctg Leu	gta Val 8125	ccc Pro	gac Asp	cca Pro	ttc Phe	aac Asn 8130	act Thr	cat His	cac His	agg Arg	51504
tct Ser 8135	atc Ile	gga Gly	gag Glu	ggt Gly	ttt Phe 8140	gta Val	tac Tyr	cca Pro	aca Thr	ccc Pro 8145	ttt Phe	tat Tyr	aac Asn	acc Thr	51549
ggg Gly 8150	ttg Leu	tgc Cys	cat His	tta Leu	ata Ile 8155	cat His	gac Asp	tgt Cys	gtt Val	att Ile 8160	gct Ala	ccc Pro	atg Met	gcc Ala	51594
gtt Val 8165	gcc Ala	ttg Leu	cgc Arg	gtc Val	aga Arg 8170	aat Asn	gta Val	act Thr	gcc Ala	gtc Val 8175	gcc Ala	cga Arg	gga Gly	gcg Ala	51639
gcc Ala 8180	cac His	ctt Leu	gct Ala	ttt Phe	gat Asp 8185	gaa Glu	aat Asn	cac His	gag Glu	ggg Gly 8190	gca Ala	gta Val	ctc Leu	ccc Pro	51684
cct Pro 8195	gac Asp	att Ile	acg Thr	tac Tyr	acg Thr 8200	tat Tyr	ttt Phe	cag Gln	tcc Ser	tct Ser 8205	tca Ser	agt Ser	gga Gly	acc Thr	51729
act Thr 8210	acc Thr	gcc Ala	cgt Arg	gga Gly	gcg Ala 8215	cgt Arg	cga Arg	aac Asn	gat Asp	gtc Val 8220	aac Asn	tcc Ser	acg Thr	tct Ser	51774
aag Lys 8225	cct Pro	agc Ser	cca Pro	tcg Ser	ggg Gly 8230	ggg Gly	ttt Phe	gaa Glu	aga Arg	cgg Arg 8235	ttg Leu	gcg Ala	tct Ser	att Ile	51819
atg Met 8240	gcc Ala	gct Ala	gac Asp	aca Thr	gcc Ala 8245	ttg Leu	cac His	gca Ala	gaa Glu	gtt Val 8250	ata Ile	ttc Phe	aac Asn	act Thr	51864
gga Gly 8255	att Ile	tac Tyr	gaa Glu	gaa Glu	act Thr 8260	cca Pro	aca Thr	gat Asp	atc Ile	aaa Lys 8265	gaa Glu	tgg Trp	cca Pro	atg Met	51909
ttt Phe 8270	ata Ile	ggc Gly	atg Met	gag Glu	ggc Gly 8275	act Thr	ttg Leu	cca Pro	agg Arg	cta Leu 8280	aac Asn	gct Ala	ctg Leu	ggg Gly	51954
tca Ser 8285	tat Tyr	acc Thr	gct Ala	cgt Arg	gtg Val 8290	gcc Ala	ggg Gly	gtc Val	att Ile	ggg Gly 8295	gcg Ala	atg Met	gtt Val	ttc Phe	51999

agc Ser 8300	cca Pro	aat Asn	tct Ser	gcg Ala	ttg Leu 8305	tat Tyr	cta Leu	act Thr	gag Glu	gtg Val 8310	gag Glu	gat Asp	agc Ser	ggg Gly	52044
atg Met 8315	acc Thr	gaa Glu	gcc Ala	aag Lys	gat Asp 8320	ggg Gly	gga Gly	ccg Pro	ggt Gly	cca Pro 8325	tca Ser	ttt Phe	aat Asn	cga Arg	52089
ttt Phe 8330	tac Tyr	cag Gln	ttt Phe	gcc Ala	gga Gly 8335	cct Pro	cat His	tta Leu	gct Ala	gcg Ala 8340	aat Asn	ccc Pro	caa Gln	aca Thr	52134
gat Asp 8345	cga Arg	gat Asp	ggc Gly	cac His	gtt Val 8350	cta Leu	tcc Ser	agt Ser	cag Gln	tct Ser 8355	acg Thr	ggt Gly	tca Ser	tca Ser	52179
aac Asn 8360	aca Thr	gag Glu	ttt Phe	agc Ser	gtg Val 8365	gat Asp	tat Tyr	ttg Leu	gca Ala	ctc Leu 8370	att Ile	tgt Cys	gga Gly	ttt Phe	52224
gga Gly 8375	gca Ala	ccc Pro	ctg Leu	ttg Leu	gcg Ala 8380	cga Arg	ctg Leu	ctt Leu	ttt Phe	tat Tyr 8385	cta Leu	gaa Glu	cgc Arg	tgt Cys	52269
gac Asp 8390	gct Ala	ggt Gly	gcg Ala	ttt Phe	aca Thr 8395	ggg Gly	ggt Gly	cac His	ggg Gly	gat Asp 8400	gcg Ala	tta Leu	aaa Lys	tat Tyr	52314
gtt Val 8405	acg Thr	ggg Gly	acc Thr	ttt Phe	gac Asp 8410	tct Ser	gaa Glu	att Ile	cca Pro	tgt Cys 8415	agt Ser	tta Leu	tgt Cys	gaa Glu	52359
aaa Lys 8420	cac His	acg Thr	cgg Arg	ccg Pro	gta Val 8425	tgc Cys	gct Ala	cac His	aca Thr	aca Thr 8430	gta Val	cac His	cga Arg	ctt Leu	52404
aga Arg 8435	caa Gln	cgc Arg	atg Met	ccg Pro	cga Arg 8440	ttt Phe	gga Gly	caa Gln	gcc Ala	acc Thr 8445	cgt Arg	caa Gln	cct Pro	att Ile	52449
ggg Gly 8450	gtg Val	ttt Phe	gga Gly	aca Thr	atg Met 8455	aac Asn	agc Ser	caa Gln	tat Tyr	agc Ser 8460	gac Asp	tgc Cys	gat Asp	cct Pro	52494
cta Leu 8465	gga Gly	aac Asn	tat Tyr	gct Ala	cca Pro 8470	tat Tyr	tta Leu	atc Ile	ctt Leu	cga Arg 8475	aaa Lys	ccc Pro	ggg Gly	gat Asp	52539
caa Gln 8480	acg Thr	gaa Glu	gca Ala	gca Ala	aag Lys 8485	gca Ala	acc Thr	atg Met	cag Gln	gac Asp 8490	act Thr	tat Tyr	agg Arg	gct Ala	52584
aca Thr 8495	cta Leu	gaa Glu	cgc Arg	ttg Leu	ttt Phe 8500	atc Ile	gat Asp	cta Leu	gaa Glu	caa Gln 8505	gag Glu	cga Arg	cta Leu	ctg Leu	52629
gat Asp 8510	cgc Arg	ggt Gly	gcc Ala	cca Pro	tgt Cys 8515	tct Ser	tcc Ser	gag Glu	gga Gly	cta Leu 8520	tcg Ser	tct Ser	gtc Val	att Ile	52674

gtg Val 8525	gat Asp	cat His	cca Pro	acg Thr	ttt Phe 8530	cgt Arg	cgc Arg	ata Ile	tta Leu	gac Asp 8535	aca Thr	ctg Leu	cgt Arg	gcg Ala	52719
cgt Arg 8540	ata Ile	gaa Glu	cag Gln	aca Thr	aca Thr 8545	aca Thr	caa Gln	ttt Phe	atg Met	aaa Lys 8550	gtg Val	ttg Leu	gtt Val	gag Glu	52764
acc Thr 8555	cgc Arg	gat Asp	tat Tyr	aag Lys	atc Ile 8560	cgt Arg	gaa Glu	gga Gly	tta Leu	tcc Ser 8565	gaa Glu	gcc Ala	acc Thr	cat His	52809
tca Ser 8570	atg Met	gcg Ala	tta Leu	acg Thr	ttt Phe 8575	gat Asp	cca Pro	tac Tyr	tca Ser	gga Gly 8580	gca Ala	ttt Phe	tgt Cys	ccc Pro	52854
att Ile 8585	acc Thr	aat Asn	ttt Phe	tta Leu	gtt Val 8590	aaa Lys	cga Arg	aca Thr	cac His	cta Leu 8595	gcc Ala	gtg Val	gta Val	caa Gln	52899
gac Asp 8600	tta Leu	gca Ala	tta Leu	agc Ser	caa Gln 8605	tgt Cys	cat His	tgt Cys	gta Val	ttt Phe 8610	tac Tyr	gga Gly	cag Gln	caa Gln	52944
gtt Val 8615	gag Glu	ggg Gly	cgg Arg	aac Asn	ttt Phe 8620	cgt Arg	aac Asn	caa Gln	ttc Phe	caa Gln 8625	cct Pro	gtt Val	ttg Leu	cgg Arg	52989
cgg Arg 8630	cgt Arg	ttt Phe	gtt Val	gac Asp	ctg Leu 8635	ttt Phe	aat Asn	ggg Gly	ggg Gly	ttt Phe 8640	ata Ile	tca Ser	aca Thr	cgc Arg	53034
tct Ser 8645	ata Ile	acc Thr	gta Val	aca Thr	tta Leu 8650	tct Ser	gaa Glu	ggt Gly	cct Pro	gta Val 8655	tcc Ser	gcc Ala	cca Pro	aat Asn	53079
ccg Pro 8660	aca Thr	ttg Leu	gga Gly	caa Gln	gac Asp 8665	gcg Ala	ccc Pro	gcg Ala	ggg Gly	cgt Arg 8670	acc Thr	ttt Phe	gat Asp	ggg Gly	53124
gat Asp 8675	tta Leu	gcg Ala	cgc Arg	gta Val	agc Ser 8680	gtg Val	gaa Glu	gtt Val	att Ile	cgg Arg 8685	gat Asp	ata Ile	cga Arg	gtt Val	53169
aaa Lys 8690	aat Asn	agg Arg	gtc Val	gtt Val	ttt Phe 8695	tca Ser	ggt Gly	aac Asn	tgt Cys	aca Thr 8700	aat Asn	ctc Leu	tct Ser	gag Glu	53214
gca Ala 8705	gcc Ala	cgg Arg	gca Ala	agg Arg	ctt Leu 8710	gta Val	ggc Gly	ctt Leu	gca Ala	agt Ser 8715	gcg Ala	tac Tyr	caa Gln	cgc Arg	53259
caa Gln 8720	gaa Glu	aaa Lys	aga Arg	gtg Val	gat Asp 8725	atg Met	tta Leu	cac His	ggg Gly	gcc Ala 8730	cta Leu	ggg Gly	ttt Phe	ttg Leu	53304
ctt Leu 8735	aaa Lys	cag Gln	ttt Phe	cac His	ggc Gly 8740	ctg Leu	tta Leu	ttt Phe	cct Pro	cgg Arg 8745	ggt Gly	atg Met	cca Pro	cca Pro	53349

aac Asn 8750	agt Ser	aaa Lys	tcc Ser	ccc Pro	aac Asn 8755	ccg Pro	cag Gln	tgg Trp	ttt Phe	tgg Trp 8760	acc Thr	ctg Leu	tta Leu	caa Gln	53394
cgc Arg 8765	aac Asn	cag Gln	atg Met	ccg Pro	gca Ala 8770	gat Asp	aaa Lys	ctt Leu	aca Thr	cac His 8775	gaa Glu	gag Glu	att Ile	acc Thr	53439
act Thr 8780	att Ile	gca Ala	gct Ala	gtt Val	aaa Lys 8785	cgg Arg	ttt Phe	acc Thr	gag Glu	gaa Glu 8790	tat Tyr	gca Ala	gca Ala	ata Ile	53484
aac Asn 8795	ttt Phe	att Ile	aat Asn	cta Leu	ccc Pro 8800	cca Pro	acc Thr	tgc Cys	ata Ile	gga Gly 8805	gaa Glu	tta Leu	gcc Ala	cag Gln	53529
ttt Phe 8810	tat Tyr	atg Met	gca Ala	aat Asn	ctt Leu 8815	att Ile	ctt Leu	aaa Lys	tac Tyr	tgc Cys 8820	gat Asp	cat His	tca Ser	cag Gln	53574
tac Tyr 8825	ctt Leu	ata Ile	aat Asn	acc Thr	tta Leu 8830	act Thr	tct Ser	ata Ile	att Ile	acg Thr 8835	ggg Gly	gcc Ala	agg Arg	cgc Arg	53619
ccg Pro 8840	cgt Arg	gac Asp	cca Pro	tca Ser	tcc Ser 8845	gtt Val	ttg Leu	cat His	tgg Trp	att Ile 8850	cgt Arg	aaa Lys	gat Asp	gtc Val	53664
acg Thr 8855	tcc Ser	gcc Ala	gcg Ala	gac Asp	ata Ile 8860	gaa Glu	acc Thr	caa Gln	gca Ala	aag Lys 8865	gcg Ala	ctt Leu	ctt Leu	gaa Glu	53709
aaa Lys 8870	acg Thr	gaa Glu	aac Asn	tta Leu	ccg Pro 8875	gaa Glu	tta Leu	tgg Trp	act Thr	acg Thr 8880	gct Ala	ttt Phe	act Thr	tca Ser	53754
act Thr 8885	cat His	tta Leu	gtc Val	cgc Arg	gcg Ala 8890	gcc Ala	atg Met	aat Asn	caa Gln	cgt Arg 8895	ccc Pro	atg Met	gtc Val	gtt Val	53799
tta Leu 8900	gga Gly	ata Ile	agc Ser	att Ile	agt Ser 8905	aaa Lys	tat Tyr	cac His	gga Gly	gcg Ala 8910	gca Ala	gga Gly	aac Asn	aac Asn	53844
cgc Arg 8915	gtc Val	ttt Phe	cag Gln	gca Ala	ggg Gly 8920	aat Asn	tgg Trp	agc Ser	ggg Gly	tta Leu 8925	aac Asn	ggg Gly	ggg Gly	aaa Lys	53889
aat Asn 8930	gta Val	tgc Cys	ccg Pro	cta Leu	ttt Phe 8935	aca Thr	ttt Phe	gat Asp	cgc Arg	act Thr 8940	cgc Arg	cgt Arg	ttt Phe	ata Ile	53934
ata Ile 8945	gca Ala	tgt Cys	cct Pro	aga Arg	gga Gly 8950	ggg Gly	ttt Phe	atc Ile	tgc Cys	ccc Pro 8955	gta Val	aca Thr	ggg Gly	ccc Pro	53979
tcg Ser 8960	tcg Ser	gga Gly	aat Asn	cga Arg	gaa Glu 8965	acc Thr	acc Thr	cta Leu	tcc Ser	gac Asp 8970	caa Gln	gtt Val	cgc Arg	ggg Gly	54024

ata	att	gtc	agt	ggc	ggg	gcc	atg	gtt	caa	tta	gcc	ata	tac	gcc	54069
Ile	Ile	Val	Ser	Gly	Gly	Ala	Met	Val	Gln	Leu	Ala	Ile	Tyr	Ala	
8975					8980					8985					
acg	gtt	gtg	cgt	gca	gtg	ggc	gct	cga	gca	caa	cat	atg	gca	ttt	54114
Thr	Val	Val	Arg	Ala	Val	Gly	Ala	Arg	Ala	Gln	His	Met	Ala	Phe	
8990					8995					9000					
gac	gac	tgg	tta	agt	ctt	aca	gac	gat	gag	ttt	tta	gcc	aga	gac	54159
Asp	Asp	Trp	Leu	Ser	Leu	Thr	Asp	Asp	Glu	Phe	Leu	Ala	Arg	Asp	
9005					9010					9015					
ttg	gag	gag	tta	cac	gac	cag	att	atc	caa	acc	ctg	gaa	acg	ccc	54204
Leu	Glu	Glu	Leu	His	Asp	Gln	Ile	Ile	Gln	Thr	Leu	Glu	Thr	Pro	
9020					9025					9030					
tgg	acc	gta	gaa	ggc	gct	cta	gaa	gca	gta	aag	att	cta	gat	gaa	54249
Trp	Thr	Val	Glu	Gly	Ala	Leu	Glu	Ala	Val	Lys	Ile	Leu	Asp	Glu	
9035					9040					9045					
aaa	acg	aca	gcg	gga	gat	ggg	gaa	acc	ccc	aca	aac	cta	gca	ttt	54294
Lys	Thr	Thr	Ala	Gly	Asp	Gly	Glu	Thr	Pro	Thr	Asn	Leu	Ala	Phe	
9050					9055					9060					
aat	ttt	gat	tct	tgt	gaa	cca	agc	cat	gac	acc	aca	tct	aac	gta	54339
Asn	Phe	Asp	Ser	Cys	Glu	Pro	Ser	His	Asp	Thr	Thr	Ser	Asn	Val	
9065					9070					9075					
tta	aac	att	tca	ggg	tca	aac	att	tca	ggg	tca	act	gtc	cct	ggt	54384
Leu	Asn	Ile	Ser	Gly	Ser	Asn	Ile	Ser	Gly	Ser	Thr	Val	Pro	Gly	
9080					9085					9090					
ctt	aaa	cga	ccc	ccc	gaa	gat	gac	gaa	ctc	ttt	gat	ctt	agt	ggt	54429
Leu	Lys	Arg	Pro	Pro	Glu	Asp	Asp	Glu	Leu	Phe	Asp	Leu	Ser	Gly	
9095					9100					9105					
att	ccc	ata	aaa	cat	ggg	aac	att	aca	atg	gaa	atg	att	taa		54471
Ile	Pro	Ile	Lys	His	Gly	Asn	Ile	Thr	Met	Glu	Met	Ile			
9110					9115					9120					
cctccctctt	tatccaatta	aagcccacac	gcgggtgagt	gtacgtaata	aacaagtcaa										54531
tattacatat	tctgttgtgt	tttctttttt	tgtgtgtagt	ccttaccat	atgacctgta										54591
atatagtgtg	tctccaacca	ttcagcttac	agtccagtgg	acagtaacag	cccgataac										54650
atg	gaa	ttg	gat	att	aat	cga	aca	ttg	ttg	gtt	cta	ctg	ggt	caa	54695
Met	Glu	Leu	Asp	Ile	Asn	Arg	Thr	Leu	Leu	Val	Leu	Leu	Gly	Gln	
		9125						9130					9135		
gtt	tat	acg	tac	atc	ttt	cag	gtt	gaa	ctg	cta	cgt	cga	tgt	gat	54740
Val	Tyr	Thr	Tyr	Ile	Phe	Gln	Val	Glu	Leu	Leu	Arg	Arg	Cys	Asp	
		9140						9145					9150		
cca	agg	gtg	gcg	tgt	cgc	ttt	tta	tat	cgg	tta	gcg	gct	aac	tgt	54785
Pro	Arg	Val	Ala	Cys	Arg	Phe	Leu	Tyr	Arg	Leu	Ala	Ala	Asn	Cys	
		9155						9160					9165		
ttg	aca	gtt	cgt	tat	tta	tta	aag	ctg	ttt	ctc	cgg	gga	ttt	aat	54830
Leu	Thr	Val	Arg	Tyr	Leu	Leu	Lys	Leu	Phe	Leu	Arg	Gly	Phe	Asn	

9170							9175							9180							
acc	cag	cta	aaa	ttt	gga	aac	act	ccc	acg	gtt	tgt	gca	ctg	cat	54875						
Thr	Gln	Leu	Lys	Phe	Gly	Asn	Thr	Pro	Thr	Val	Cys	Ala	Leu	His							
		9185					9190					9195									
tgg	gca	tta	tgt	tat	gta	aag	gga	gaa	ggt	gag	cgt	ttg	ttt	gag	54920						
Trp	Ala	Leu	Cys	Tyr	Val	Lys	Gly	Glu	Gly	Glu	Arg	Leu	Phe	Glu							
		9200					9205					9210									
ttg	cta	caa	cat	ttt	aaa	acg	cgt	ttt	gtt	tat	ggt	gag	act	aaa	54965						
Leu	Leu	Gln	His	Phe	Lys	Thr	Arg	Phe	Val	Tyr	Gly	Glu	Thr	Lys							
		9215					9220					9225									
gac	tca	aac	tgt	atc	aaa	gat	tac	ttt	gtc	tca	gcg	ttt	aac	tta	55010						
Asp	Ser	Asn	Cys	Ile	Lys	Asp	Tyr	Phe	Val	Ser	Ala	Phe	Asn	Leu							
		9230					9235					9240									
aaa	acc	tgc	caa	tat	cac	cat	gag	ctg	tcg	tta	aca	aca	tac	gga	55055						
Lys	Thr	Cys	Gln	Tyr	His	His	Glu	Leu	Ser	Leu	Thr	Thr	Tyr	Gly							
		9245					9250					9255									
ggt	tac	gta	tcg	agt	gaa	att	cag	ttt	tta	cac	gac	att	gag	aat	55100						
Gly	Tyr	Val	Ser	Ser	Glu	Ile	Gln	Phe	Leu	His	Asp	Ile	Glu	Asn							
		9260					9265					9270									
ttt	tta	aaa	cag	ctt	aat	tac	tgc	tat	att	atc	acg	tct	tct	cgt	55145						
Phe	Leu	Lys	Gln	Leu	Asn	Tyr	Cys	Tyr	Ile	Ile	Thr	Ser	Ser	Arg							
		9275					9280					9285									
gag	gcg	cta	aac	aca	ttg	gaa	acc	gtg	acg	cgg	ttt	atg	aca	gat	55190						
Glu	Ala	Leu	Asn	Thr	Leu	Glu	Thr	Val	Thr	Arg	Phe	Met	Thr	Asp							
		9290					9295					9300									
act	ata	gga	agc	ggt	cta	ata	cca	ccc	gtg	gag	ttg	ttt	gat	ccg	55235						
Thr	Ile	Gly	Ser	Gly	Leu	Ile	Pro	Pro	Val	Glu	Leu	Phe	Asp	Pro							
		9305					9310					9315									
gcg	cat	cca	tgt	gct	ata	tgt	ttt	gaa	gaa	tta	tgt	ata	aca	gct	55280						
Ala	His	Pro	Cys	Ala	Ile	Cys	Phe	Glu	Glu	Leu	Cys	Ile	Thr	Ala							
		9320					9325					9330									
aac	caa	ggt	gag	acc	tta	cat	cgt	aga	tta	tta	gga	tgt	atc	tgc	55325						
Asn	Gln	Gly	Glu	Thr	Leu	His	Arg	Arg	Leu	Leu	Gly	Cys	Ile	Cys							
		9335					9340					9345									
gat	cac	gtt	act	aag	caa	gtt	cgg	gtt	aac	gtg	gat	gtt	gac	gat	55370						
Asp	His	Val	Thr	Lys	Gln	Val	Arg	Val	Asn	Val	Asp	Val	Asp	Asp							
		9350					9355					9360									
att	att	cgg	tgt	tta	cca	tat	atc	cct	gat	gta	ccg	gat	atc	aaa	55415						
Ile	Ile	Arg	Cys	Leu	Pro	Tyr	Ile	Pro	Asp	Val	Pro	Asp	Ile	Lys							
		9365					9370					9375									
cgt	caa	tcc	gcc	gtt	gaa	gcg	tta	cga	aca	ctt	caa	acc	aag	acg	55460						
Arg	Gln	Ser	Ala	Val	Glu	Ala	Leu	Arg	Thr	Leu	Gln	Thr	Lys	Thr							
		9380					9385					9390									
gta	gtc	aat	ccc	atg	gga	gca	aag	aac	gat	acg	ttt	gac	caa	aca	55505						
Val	Val	Asn	Pro	Met	Gly	Ala	Lys	Asn	Asp	Thr	Phe	Asp	Gln	Thr							

9395							9400							9405							
tac	gaa	att	gcg	agc	acc	atg	ctt	gat	tct	tat	aat	gtt	ttt	aaa		55550					
Tyr	Glu	Ile	Ala	Ser	Thr	Met	Leu	Asp	Ser	Tyr	Asn	Val	Phe	Lys							
		9410					9415					9420									
cct	gcc	cct	cgg	tgt	atg	tac	gcc	atc	agc	gag	ctt	aaa	ttc	tgg		55595					
Pro	Ala	Pro	Arg	Cys	Met	Tyr	Ala	Ile	Ser	Glu	Leu	Lys	Phe	Trp							
		9425					9430					9435									
tta	acg	tct	aat	tcc	act	gaa	gga	ccc	caa	cgt	act	tta	gac	gtg		55640					
Leu	Thr	Ser	Asn	Ser	Thr	Glu	Gly	Pro	Gln	Arg	Thr	Leu	Asp	Val							
		9440					9445					9450									
ttt	gtt	gat	aat	ttg	gat	gta	tta	aac	gaa	cat	gaa	aaa	cac	gca		55685					
Phe	Val	Asp	Asn	Leu	Asp	Val	Leu	Asn	Glu	His	Glu	Lys	His	Ala							
		9455					9460					9465									
gaa	ctt	aca	gcc	gta	acg	gtt	gag	ttg	gcg	tta	ttt	gga	aaa	act		55730					
Glu	Leu	Thr	Ala	Val	Thr	Val	Glu	Leu	Ala	Leu	Phe	Gly	Lys	Thr							
		9470					9475					9480									
ccc	ata	cac	ttt	gat	agg	gcg	ttt	tct	gaa	gaa	ctc	gga	tct	ctg		55775					
Pro	Ile	His	Phe	Asp	Arg	Ala	Phe	Ser	Glu	Glu	Leu	Gly	Ser	Leu							
		9485					9490					9495									
gat	gca	att	gat	agt	att	ttg	gtt	ggc	aat	cgc	tca	tcc	tca	cca		55820					
Asp	Ala	Ile	Asp	Ser	Ile	Leu	Val	Gly	Asn	Arg	Ser	Ser	Ser	Pro							
		9500					9505					9510									
gac	agt	cag	ata	gaa	gca	tta	att	aaa	gcc	tgt	tat	gcc	cat	cat		55865					
Asp	Ser	Gln	Ile	Glu	Ala	Leu	Ile	Lys	Ala	Cys	Tyr	Ala	His	His							
		9515					9520					9525									
cta	tcg	tcg	cct	ctc	atg	cgt	cac	att	tct	aac	ccg	agt	cat	gat		55910					
Leu	Ser	Ser	Pro	Leu	Met	Arg	His	Ile	Ser	Asn	Pro	Ser	His	Asp							
		9530					9535					9540									
aac	gaa	gcc	gcc	tta	cgc	caa	ctt	tta	gaa	aga	gtt	ggg	tgt	gag		55955					
Asn	Glu	Ala	Ala	Leu	Arg	Gln	Leu	Leu	Glu	Arg	Val	Gly	Cys	Glu							
		9545					9550					9555									
gat	gat	tta	acc	aaa	gag	gcg	agt	gac	agc	gct	aca	gca	tcc	gaa		56000					
Asp	Asp	Leu	Thr	Lys	Glu	Ala	Ser	Asp	Ser	Ala	Thr	Ala	Ser	Glu							
		9560					9565					9570									
tgt	gat	ctg	aac	gat	gat	agt	agc	ata	act	ttt	gct	gtt	cat	gga		56045					
Cys	Asp	Leu	Asn	Asp	Asp	Ser	Ser	Ile	Thr	Phe	Ala	Val	His	Gly							
		9575					9580					9585									
tgg	gaa	aac	ctg	tta	tcc	aaa	gca	aaa	att	gac	gct	gcg	gaa	aga		56090					
Trp	Glu	Asn	Leu	Leu	Ser	Lys	Ala	Lys	Ile	Asp	Ala	Ala	Glu	Arg							
		9590					9595					9600									
aaa	cga	gta	tat	ctt	gaa	cat	ctg	tct	aag	cgc	tct	cta	acc	agc		56135					
Lys	Arg	Val	Tyr	Leu	Glu	His	Leu	Ser	Lys	Arg	Ser	Leu	Thr	Ser							
		9605					9610					9615									
ctc	ggt	aga	tgt	atc	cgc	gaa	cag	cgc	caa	gag	cta	gaa	aaa	aca		56180					
Leu	Gly	Arg	Cys	Ile	Arg	Glu	Gln	Arg	Gln	Glu	Leu	Glu	Lys	Thr							

9620			9625			9630									
ctc	agg	gta	aac	ggt	tat	gga	gag	gcc	tta	ttg	cag	aca	ttt	ggt	56225
Leu	Arg	Val	Asn	Val	Tyr	Gly	Glu	Ala	Leu	Leu	Gln	Thr	Phe	Val	
		9635					9640						9645		
tcg	atg	caa	aat	ggg	ttt	ggg	gca	cga	aac	gtg	ttt	tta	gct	aag	56270
Ser	Met	Gln	Asn	Gly	Phe	Gly	Ala	Arg	Asn	Val	Phe	Leu	Ala	Lys	
		9650					9655						9660		
ggt	tcc	cag	gca	ggg	tgt	att	atc	gac	aat	cgc	att	cag	gaa	gcg	56315
Val	Ser	Gln	Ala	Gly	Cys	Ile	Ile	Asp	Asn	Arg	Ile	Gln	Glu	Ala	
		9665					9670						9675		
gcc	ttt	gat	gca	cat	aga	ttt	ata	agg	aat	acc	tta	ggt	cga	cat	56360
Ala	Phe	Asp	Ala	His	Arg	Phe	Ile	Arg	Asn	Thr	Leu	Val	Arg	His	
		9680					9685						9690		
aca	gta	gat	gcg	gct	atg	tta	cct	gca	ctt	aca	cat	aaa	ttt	ttt	56405
Thr	Val	Asp	Ala	Ala	Met	Leu	Pro	Ala	Leu	Thr	His	Lys	Phe	Phe	
		9695					9700						9705		
gag	ttg	gtc	aac	ggc	cca	ttg	ttt	aat	cac	gat	gaa	cac	cgt	ttt	56450
Glu	Leu	Val	Asn	Gly	Pro	Leu	Phe	Asn	His	Asp	Glu	His	Arg	Phe	
		9710					9715						9720		
gca	caa	ccc	cct	aac	acc	gcc	tta	ttt	ttt	acc	gtg	gaa	aac	ggt	56495
Ala	Gln	Pro	Pro	Asn	Thr	Ala	Leu	Phe	Phe	Thr	Val	Glu	Asn	Val	
		9725					9730						9735		
ggc	cta	ttt	ccg	cac	tta	aaa	gag	gaa	ttg	gca	aag	ttt	atg	ggc	56540
Gly	Leu	Phe	Pro	His	Leu	Lys	Glu	Glu	Leu	Ala	Lys	Phe	Met	Gly	
		9740					9745						9750		
ggt	gtc	ggt	ggt	tcc	aac	tgg	ctt	ctc	agt	cca	ttt	agg	ggc	ttt	56585
Gly	Val	Val	Gly	Ser	Asn	Trp	Leu	Leu	Ser	Pro	Phe	Arg	Gly	Phe	
		9755					9760						9765		
tat	tgc	ttt	tct	ggg	gta	gaa	ggc	ggt	act	ttt	gca	cag	aga	ctt	56630
Tyr	Cys	Phe	Ser	Gly	Val	Glu	Gly	Val	Thr	Phe	Ala	Gln	Arg	Leu	
		9770					9775						9780		
gcc	tgg	aaa	tat	att	agg	gag	ctt	gtg	ttt	gca	acc	aca	cta	ttc	56675
Ala	Trp	Lys	Tyr	Ile	Arg	Glu	Leu	Val	Phe	Ala	Thr	Thr	Leu	Phe	
		9785					9790						9795		
acc	tct	ggt	ttc	cat	tgt	ggg	gag	gtg	cgg	tta	tgt	cgc	ggt	gac	56720
Thr	Ser	Val	Phe	His	Cys	Gly	Glu	Val	Arg	Leu	Cys	Arg	Val	Asp	
		9800					9805						9810		
cgt	cta	ggt	aag	gat	cca	cgc	ggg	tgc	acg	tct	caa	cct	aaa	ggt	56765
Arg	Leu	Gly	Lys	Asp	Pro	Arg	Gly	Cys	Thr	Ser	Gln	Pro	Lys	Gly	
		9815					9820						9825		
ata	ggc	agt	tcc	cac	gga	ccc	tta	gac	ggc	att	tat	tta	acg	tac	56810
Ile	Gly	Ser	Ser	His	Gly	Pro	Leu	Asp	Gly	Ile	Tyr	Leu	Thr	Tyr	
		9830					9835						9840		
gaa	gaa	aca	tgt	ccc	ctt	gtg	gct	att	att	caa	agt	gga	gaa	aca	56855
Glu	Glu	Thr	Cys	Pro	Leu	Val	Ala	Ile	Ile	Gln	Ser	Gly	Glu	Thr	

9845	9850	9855	
ggg atc gac cag aat acc gtc gta atc tac gat tca gac gtt ttt			56900
Gly Ile Asp Gln Asn Thr Val Val Ile Tyr Asp Ser Asp Val Phe			
9860	9865	9870	
tct ctt cta tac acc cta atg cag cgg ctg gct ccg gat tca acg			56945
Ser Leu Leu Tyr Thr Leu Met Gln Arg Leu Ala Pro Asp Ser Thr			
9875	9880	9885	
gac ccg gcg ttt tca taa cctccggttac ggggggtgtgg ttatgctttt			56993
Asp Pro Ala Phe Ser			
9890			
tatgcatatt ttct atg ttt gtt acg gcg gtt gtg tgc gtc tct cca agc			57043
Met Phe Val Thr Ala Val Val Ser Val Ser Pro Ser			
9895	9900		
tcg ttt tat gag agt tta caa gta gag ccc aca caa tca gaa gat			57088
Ser Phe Tyr Glu Ser Leu Gln Val Glu Pro Thr Gln Ser Glu Asp			
9905	9910	9915	
ata acc cgg tct gct cat ctg ggc gat ggt gat gaa atc aga gaa			57133
Ile Thr Arg Ser Ala His Leu Gly Asp Gly Asp Glu Ile Arg Glu			
9920	9925	9930	
gct ata cac aag tcc cag gac gcc gaa aca aaa ccc acg ttt tac			57178
Ala Ile His Lys Ser Gln Asp Ala Glu Thr Lys Pro Thr Phe Tyr			
9935	9940	9945	
gtc tgc cca ccg cca aca ggc tcc aca atc gta cga tta gaa cca			57223
Val Cys Pro Pro Pro Thr Gly Ser Thr Ile Val Arg Leu Glu Pro			
9950	9955	9960	
act cgg aca tgt ccg gat tat cac ctt ggt aaa aac ttt aca gag			57268
Thr Arg Thr Cys Pro Asp Tyr His Leu Gly Lys Asn Phe Thr Glu			
9965	9970	9975	
ggt att gct gtt gtt tat aaa gaa aac att gca gcg tac aag ttt			57313
Gly Ile Ala Val Val Tyr Lys Glu Asn Ile Ala Ala Tyr Lys Phe			
9980	9985	9990	
aag gcg acg gta tat tac aaa gat gtt atc gtt agc acg gcg tgg			57358
Lys Ala Thr Val Tyr Tyr Lys Asp Val Ile Val Ser Thr Ala Trp			
9995	10000	10005	
gcc gga agt tct tat acg caa att act aat aga tat gcg gat agg			57403
Ala Gly Ser Ser Tyr Thr Gln Ile Thr Asn Arg Tyr Ala Asp Arg			
10010	10015	10020	
gta cca att ccc gtt tca gag atc acg gac acc att gat aag ttt			57448
Val Pro Ile Pro Val Ser Glu Ile Thr Asp Thr Ile Asp Lys Phe			
10025	10030	10035	
ggc aag tgt tct tct aaa gca acg tac gta cga aat aac cac aaa			57493
Gly Lys Cys Ser Ser Lys Ala Thr Tyr Val Arg Asn Asn His Lys			
10040	10045	10050	
gtt gaa gcc ttt aat gag gat aaa aat cca cag gat atg cct cta			57538
Val Glu Ala Phe Asn Glu Asp Lys Asn Pro Gln Asp Met Pro Leu			

10055		10060		10065	
atc gca tca aaa tat aat	tct gtg gga tcc aaa	gca tgg cat act	57583		
Ile Ala Ser Lys Tyr Asn	Ser Val Gly Ser Lys	Ala Trp His Thr			
10070	10075	10080			
acc aat gac acg tac atg	gtt gcc gga acc ccc	gga aca tat agg	57628		
Thr Asn Asp Thr Tyr Met	Val Ala Gly Thr Pro	Gly Thr Tyr Arg			
10085	10090	10095			
acg ggc acg tcg gtg aat	tgc atc att gag gaa	gtt gaa gcc aga	57673		
Thr Gly Thr Ser Val Asn	Cys Ile Ile Glu Glu	Val Glu Ala Arg			
10100	10105	10110			
tca ata ttc cct tat gat	agt ttt gga ctt tcc	acg gga gat ata	57718		
Ser Ile Phe Pro Tyr Asp	Ser Phe Gly Leu Ser	Thr Gly Asp Ile			
10115	10120	10125			
ata tac atg tcc ccg ttt	ttt ggc cta cgg gat	ggg gca tac aga	57763		
Ile Tyr Met Ser Pro Phe	Phe Gly Leu Arg Asp	Gly Ala Tyr Arg			
10130	10135	10140			
gaa cat tcc aat tat gca	atg gat cgt ttt cac	cag ttt gag ggt	57808		
Glu His Ser Asn Tyr Ala	Met Asp Arg Phe His	Gln Phe Glu Gly			
10145	10150	10155			
tat aga caa agg gat ctt	gac act aga gca tta	ctg gaa cct gca	57853		
Tyr Arg Gln Arg Asp Leu	Asp Thr Arg Ala Leu	Leu Glu Pro Ala			
10160	10165	10170			
gcg cgg aac ttt tta gtc	acg cct cat tta acg	gtt ggt tgg aac	57898		
Ala Arg Asn Phe Leu Val	Thr Pro His Leu Thr	Val Gly Trp Asn			
10175	10180	10185			
tgg aag cca aaa cga acg	gaa gtt tgt tcg ctt	gtc aag tgg cgt	57943		
Trp Lys Pro Lys Arg Thr	Glu Val Cys Ser Leu	Val Lys Trp Arg			
10190	10195	10200			
gag gtt gaa gac gta gtt	cgc gat gag tat gca	cac aat ttt cgc	57988		
Glu Val Glu Asp Val Val	Arg Asp Glu Tyr Ala	His Asn Phe Arg			
10205	10210	10215			
ttt aca atg aaa aca ctt	tct acc acg ttt ata	agt gaa aca aac	58033		
Phe Thr Met Lys Thr Leu	Ser Thr Thr Phe Ile	Ser Glu Thr Asn			
10220	10225	10230			
gag ttt aat ctt aac caa	atc cat ctc agt caa	tgt gta aag gag	58078		
Glu Phe Asn Leu Asn Gln	Ile His Leu Ser Gln	Cys Val Lys Glu			
10235	10240	10245			
gaa gcc cgg gct att att	aac cgg atc tat aca	acc aga tac aac	58123		
Glu Ala Arg Ala Ile Ile	Asn Arg Ile Tyr Thr	Thr Arg Tyr Asn			
10250	10255	10260			
tca tct cat gtt aga acc	ggg gat atc cag acc	tac ctt gcc aga	58168		
Ser Ser His Val Arg Thr	Gly Asp Ile Gln Thr	Tyr Leu Ala Arg			
10265	10270	10275			
ggg ggg ttt gtt gtg gtg	ttt caa ccc ctg ctg	agc aat tcc ctc	58213		
Gly Gly Phe Val Val Val	Phe Gln Pro Leu Leu	Ser Asn Ser Leu			

10280		10285		10290	
gcc	cgt ctc tat ctc caa	gaa ttg gtc cgt gaa	aac act aat cat	58258	
Ala	Arg Leu Tyr Leu Gln	Glu Leu Val Arg Glu	Asn Thr Asn His		
10295		10300		10305	
tca	cca caa aaa cac ccg	act cga aat acc aga	tcc cga cga agc	58303	
Ser	Pro Gln Lys His Pro	Thr Arg Asn Thr Arg	Ser Arg Arg Ser		
10310		10315		10320	
gtg	cca gtt gag ttg cgt	gcc aat aga aca ata	aca acc acc tca	58348	
Val	Pro Val Glu Leu Arg	Ala Asn Arg Thr Ile	Thr Thr Thr Ser		
10325		10330		10335	
tcg	gtg gaa ttt gct atg	ctc cag ttt aca tat	gac cac att caa	58393	
Ser	Val Glu Phe Ala Met	Leu Gln Phe Thr Tyr	Asp His Ile Gln		
10340		10345		10350	
gag	cat gtt aat gaa atg	ttg gca cgt atc tcc	tcg tcg tgg tgc	58438	
Glu	His Val Asn Glu Met	Leu Ala Arg Ile Ser	Ser Ser Trp Cys		
10355		10360		10365	
cag	cta caa aat cgc gaa	cgc gcc ctt tgg agc	gga cta ttt cca	58483	
Gln	Leu Gln Asn Arg Glu	Arg Ala Leu Trp Ser	Gly Leu Phe Pro		
10370		10375		10380	
att	aac cca agt gct tta	gcg agc acc att ttg	gat caa cgt gtt	58528	
Ile	Asn Pro Ser Ala Leu	Ala Ser Thr Ile Leu	Asp Gln Arg Val		
10385		10390		10395	
aaa	gct cgt att ctc ggc	gac gtt atc tcc gtt	tct aat tgt cca	58573	
Lys	Ala Arg Ile Leu Gly	Asp Val Ile Ser Val	Ser Asn Cys Pro		
10400		10405		10410	
gaa	ctg gga tca gat aca	cgc att ata ctt caa	aac tct atg agg	58618	
Glu	Leu Gly Ser Asp Thr	Arg Ile Ile Leu Gln	Asn Ser Met Arg		
10415		10420		10425	
gta	tct ggt agt act acg	cgt tgt tat agc cgt	cct tta att tca	58663	
Val	Ser Gly Ser Thr Thr	Arg Cys Tyr Ser Arg	Pro Leu Ile Ser		
10430		10435		10440	
ata	gtt agt tta aat ggg	tcc ggg acg gtg gag	ggc cag ctt gga	58708	
Ile	Val Ser Leu Asn Gly	Ser Gly Thr Val Glu	Gly Gln Leu Gly		
10445		10450		10455	
aca	gat aac gag tta att	atg tcc aga gat ctg	tta gaa cca tgc	58753	
Thr	Asp Asn Glu Leu Ile	Met Ser Arg Asp Leu	Leu Glu Pro Cys		
10460		10465		10470	
gtg	gct aat cac aag cga	tat ttt cta ttt ggg	cat cac tac gta	58798	
Val	Ala Asn His Lys Arg	Tyr Phe Leu Phe Gly	His His Tyr Val		
10475		10480		10485	
tat	tat gag gat tat cgt	tac gtc cgt gaa atc	gca gtc cat gat	58843	
Tyr	Tyr Glu Asp Tyr Arg	Tyr Val Arg Glu Ile	Ala Val His Asp		
10490		10495		10500	
gtg	gga atg att agc act	tac gta gat tta aac	tta aca ctt ctt	58888	
Val	Gly Met Ile Ser Thr	Tyr Val Asp Leu Asn	Leu Thr Leu Leu		

10505		10510		10515	
aaa gat aga gag ttt atg	ccg ctg caa gta tat	aca aga gac gag	58933		
Lys Asp Arg Glu Phe Met	Pro Leu Gln Val Tyr	Thr Arg Asp Glu			
10520	10525	10530			
ctg cgg gat aca gga tta	cta gac tac agt gaa	att caa cgc cga	58978		
Leu Arg Asp Thr Gly Leu	Leu Asp Tyr Ser Glu	Ile Gln Arg Arg			
10535	10540	10545			
aat caa atg cat tcg ctg	cgt ttt tat gac ata	gac aag gtt gtg	59023		
Asn Gln Met His Ser Leu	Arg Phe Tyr Asp Ile	Asp Lys Val Val			
10550	10555	10560			
caa tat gat agc gga acg	gcc att atg cag ggc	atg gct cag ttt	59068		
Gln Tyr Asp Ser Gly Thr	Ala Ile Met Gln Gly	Met Ala Gln Phe			
10565	10570	10575			
ttc cag gga ctt ggg acc	gcg ggc cag gcc gtt	gga cat gtg gtt	59113		
Phe Gln Gly Leu Gly Thr	Ala Gly Gln Ala Val	Gly His Val Val			
10580	10585	10590			
ctt ggg gcc acg gga gcg	ctg ctt tcc acc gta	cac gga ttt acc	59158		
Leu Gly Ala Thr Gly Ala	Leu Leu Ser Thr Val	His Gly Phe Thr			
10595	10600	10605			
acg ttt tta tct aac cca	ttt ggg gca ttg gcc	gtg gga tta ttg	59203		
Thr Phe Leu Ser Asn Pro	Phe Gly Ala Leu Ala	Val Gly Leu Leu			
10610	10615	10620			
gtt ttg gcg gga ctg gta	gcg gcc ttt ttt gcg	tac cgg tac gtg	59248		
Val Leu Ala Gly Leu Val	Ala Ala Phe Phe Ala	Tyr Arg Tyr Val			
10625	10630	10635			
ctt aaa ctt aaa aca agc	ccg atg aag gca tta	tat cca ctc aca	59293		
Leu Lys Leu Lys Thr Ser	Pro Met Lys Ala Leu	Tyr Pro Leu Thr			
10640	10645	10650			
acc aag ggg tta aaa cag	tta ccg gaa gga atg	gat ccc ttt gcc	59338		
Thr Lys Gly Leu Lys Gln	Leu Pro Glu Gly Met	Asp Pro Phe Ala			
10655	10660	10665			
gag aaa ccc aac gct act	gat acc cca ata gaa	gaa att ggc gac	59383		
Glu Lys Pro Asn Ala Thr	Asp Thr Pro Ile Glu	Glu Ile Gly Asp			
10670	10675	10680			
tca caa aac act gaa ccg	tcg gta aat agc ggg	ttt gat ccc gat	59428		
Ser Gln Asn Thr Glu Pro	Ser Val Asn Ser Gly	Phe Asp Pro Asp			
10685	10690	10695			
aaa ttt cga gaa gcc cag	gaa atg att aaa tat	atg acg tta gta	59473		
Lys Phe Arg Glu Ala Gln	Glu Met Ile Lys Tyr	Met Thr Leu Val			
10700	10705	10710			
tct gcg gct gag cgc caa	gaa tct aaa gcc cgc	aaa aaa aat aag	59518		
Ser Ala Ala Glu Arg Gln	Glu Ser Lys Ala Arg	Lys Lys Asn Lys			
10715	10720	10725			
act agc gcc ctt tta act	tca cgt ctt acc ggc	ctt gct tta cga	59563		
Thr Ser Ala Leu Leu Thr	Ser Arg Leu Thr Gly	Leu Ala Leu Arg			

10730		10735		10740	
aat	cgc cga gga tac tcc	cgt gtt cgc acc gag	aat gta acg ggg	59608	
Asn	Arg Arg Gly Tyr Ser	Arg Val Arg Thr Glu	Asn Val Thr Gly		
10745		10750		10755	
gtg	taa atagccaggg	ggtttgtttt	aatttattaa	taaaaatgtg	tattacgtta 59664
Val					
10760					
ctcatgtgtc	tccattacgc	atcacagggg	gtattttatac	ccgataatat	acaaaacgcg 59724
ttttgtacct	ctaccgcacc	cgatatctta	acgggggttat	t atg gaa tcg tct	59777
				Met Glu Ser Ser	
aac	att aac gcg cta caa	caa ccg tcg tct atc	gca cat cat ccg	59822	
Asn	Ile Asn Ala Leu Gln	Gln Pro Ser Ser Ile	Ala His His Pro		
10765		10770		10775	
tcc	aaa cag tgc gct tca	agt ctc aat gaa aca	gta aaa gat tct	59867	
Ser	Lys Gln Cys Ala Ser	Ser Leu Asn Glu Thr	Val Lys Asp Ser		
10780		10785		10790	
ccc	ccc gcg att tat gaa	gat agg tta gaa cac	acg ccg gta caa	59912	
Pro	Pro Ala Ile Tyr Glu	Asp Arg Leu Glu His	Thr Pro Val Gln		
10795		10800		10805	
tta	ccc cgc gac ggt aca	ccc cga gac gta tgt	tct gtg gga cag	59957	
Leu	Pro Arg Asp Gly Thr	Pro Arg Asp Val Cys	Ser Val Gly Gln		
10810		10815		10820	
cta	acc tgt cga gca tgt	gca acg aaa cct ttt	cgc ctt aac cgc	60002	
Leu	Thr Cys Arg Ala Cys	Ala Thr Lys Pro Phe	Arg Leu Asn Arg		
10825		10830		10835	
gac	agc caa tac gac tac	tta aac aca tgt cca	ggg ggc cgt cat	60047	
Asp	Ser Gln Tyr Asp Tyr	Leu Asn Thr Cys Pro	Gly Gly Arg His		
10840		10845		10850	
att	tca ctg gca ctg gag	att ata acg ggt cga	tgg gtt tgc atc	60092	
Ile	Ser Leu Ala Leu Glu	Ile Ile Thr Gly Arg	Trp Val Cys Ile		
10855		10860		10865	
ccg	cgt gtg ttt ccg gat	acc cca gag gaa aaa	tgg atg gcg cca	60137	
Pro	Arg Val Phe Pro Asp	Thr Pro Glu Glu Lys	Trp Met Ala Pro		
10870		10875		10880	
tat	att att cca gac cga	gaa caa cca tca tca	ggg gat gaa gat	60182	
Tyr	Ile Ile Pro Asp Arg	Glu Gln Pro Ser Ser	Gly Asp Glu Asp		
10885		10890		10895	
tct	gac acc gat taa atttaactta	aataaaacct	taccacccat	aaaaacgcct	60237
Ser	Asp Thr Asp				
10900					
tctgtttgtt	taacacgaca	ccgcttaaca	aaaaaaaaaa	aaccaaacac	gcctttttatg 60297
aatgtaatac	ttttatttgt	tggttaacac	cgccccacca	tcattctgatt	tgcaaacata 60357

tcggcgtcgt	ctgccgtgga	cccctgtatt	aaaggggcct	tggaactcgc	ctccactgca	60417
tttacatctt	gtccaactgt	atctgtatgt	gggggtgcttg	ttgtattttg	ggatgagcat	60477
agacccgaaa	cgctttgaag	ctgtttttaat	aaaatcgata	ttcgaggatc	ccgtgtcccc	60537
tctggtatat	ttgtatgggtg	cgacaaaggc	atttgtgtcc	cattttgtga	ttttagctct	60597
gtaacctcct	gttgcagttt	tgccacaacc	ccagcaagct	cttcgtgctg	accattagaa	60657
actctgtgtc	tcctctgcca	atatgatgga	gaaactcgac	gtctccgatg	cgttatatac	60717
gttggttcac	cgggaaaata	tatatattgag	ggaaactctc	cgtccatttg	agactcccca	60777
ctataaaaag	aatccaattc	cctttgatcc	atgctcttga	aatcccgttt	tcctggacga	60837
cggacatcgg	ttttgtctgg	aaaatttaca	cacgggggtct	gcaagtcaat	accccgttcg	60897
gcggccaatg	cgttcataaa	tgcggacatt	tgcatttcca	aacgattggg	tggtggatat	60957
cccggaaacc	cgtacgggtcc	cccgaagtgt	cccggagggc	aaccataacc	ccctgtatta	61017
ggtgggaagg	caggcgggtg	tggagatcca	tatggcccga	cgatatactg	tcctgttattt	61077
ggagctccaa	ttgataacctg	cggattttta	gtctgcccgg	ttaacagctg	tgaataatac	61137
gcggtaggta	tcagtacaaa	ttcccctccg	gttggaaacgc	ccgacggggg	ctgtggtgag	61197
atattactag	cgttacctgc	tacagaagcc	atatcgctgt	cgttcctaca	caactgcgta	61257
acctttaaat	gcggaacagt	cttttcacaa	tcttcatttg	attccccaac	acccaacgcg	61317
agatcgtata	tgggcccgc	gggggtggaat	gtggcgttta	taacacccgc	gttgggtaat	61377
ttagactcca	ccccattaac	gttggttatc	cgagcaagtc	catatccggt	gctagcctga	61437
agataaacgt	gaccataat	tcgggcttcg	cgtctacgtt	ttgcaaccac	gtcccatcta	61497
tctcttaaaa	gcatattggt	cacggctgtg	gataataaca	ccttggcgag	tttatcttcg	61557
ctaaccttcc	atactttatt	taaacccgcg	tagtctttta	ccagcgacaa	taaccgcgct	61617
ttactttcca	tcgataaaac	ccggaatggt	tcaattgaag	attccggggg	acagtcataa	61677
ttgaccactg	ttccaacgcg	tcttccaaca	acacataacg	caacatgggt	aaaaaaatta	61737
ccgtctggta	tctcattcgg	ggacaatcgt	tttgaagaca	gggatacgga	gggtaagtaa	61797
tttgtgacca	agtataacgc	acgttctagc	ggagataata	cagaatctct	atttccaaaa	61857
aaattcgaat	gggcccgttc	aaacagcacc	gcatgtagtt	gagggcatct	aacgataccc	61917
aaaaaaaaag	gtccgcgtat	gtcctcaatg	attgcgatta	cttcacccac	gacacagtct	61977
tttcgatgat	cgatgtttat	tggtatttta	ctagtaggcg	gcaaagcgga	ccgcacaatc	62037
tctggggtaa	tatttaattc	cccttcgtcc	tttgaatata	aggctaaata	cccagccacg	62097
tataacgctt	cacagttctc	ttcgtcagct	tcagcagcca	ttataaacac	cccacggacc	62157

ggatagtgaa	tactcacggt	gtggaggcaa	actgaggaat	gacacccaaa	cagacaaaat	62217
atagaagatc	atagtcactg	ttaacgttga	actgcgcaag	gcggcgactt	tcttccaatg	62277
ccgcccttac	acgcggttgg	tgcatthaaca	ttccaagtcc	ccgttcatat	tgcaacataa	62337
cactgtcatg	tattgatacc	acggcggcta	tgggtaggga	tgtaacattt	tgtcggcggt	62397
gttctaattc	caatgcaatt	aagcttatga	gccgatcttg	gtactgtcca	gaagaaatat	62457
ctattacggt	tcttcctaaa	cttccacgac	taagctgggt	atgcgcgtct	aaacaaagag	62517
caactaatcc	aggaaacatt	tcagtcagct	ctgtgggtccg	atttaacgta	tacagtgggtg	62577
ctatatatcg	ttcacataaa	aattgaaagt	tattattacc	gctttttaaac	ttcccatcaa	62637
accccgtcgc	tccgcgcaag	attacattgt	tggtaggggt	tcctgttgct	tctgacacaa	62697
tcaaaccag	ttgaaaatta	tttttttagtt	tatctccgta	tacgttccccg	ttccataata	62757
agcgccttaa	taataataac	gccgtaatcg	tgtcaattgt	taaccttaat	agagtttggt	62817
cttcataag	aaacacgttt	tgggcccgtt	ctaaatacgc	cgcgcccgcc	tgttgaatct	62877
tgtccacata	tgcggtatga	ttgcatcaa	taatgtcatt	aaccccagga	ttaaactgtc	62937
caggtgcagg	cggtaggacc	tgcaaccgta	taagcgcctc	cataacagaa	tgtgacgtta	62997
aggcgccttg	atcataccgc	ccccacgag	catgaaactg	gtcgcgtgggt	agacgatcat	63057
agcaaaattg	ataactgttt	ttattttcgt	gtgttgatcat	ataattcaca	aatgtctcag	63117
tatatcccg	taggtgctct	ataagggtcc	cgaaggacga	aacttgagggt	tcgtggacac	63177
tattagatgt	cctatacatt	aaatataaac	ataataccgc	acactcgaac	gcggagtacg	63237
ctctatctcc	aacatacatt	ctcccggcgg	actgtagaca	tggtaccggt	gtgttcataa	63297
acgtacggga	aatgcgcccc	tctttacaat	caactccgcg	tgtagctacg	ggcctatcta	63357
acacaagccg	ttcctgcaga	gtacgatacc	atggcccga	aacaatccct	ggagagttat	63417
tgccccttgc	ccttcccaag	tacaccagg	tgataaaatc	cacttgaaag	tttgtatcgt	63477
actgcaacgg	tgcattcat	ttggcaatct	gtacctcggg	gtgtatagac	tcattgcgta	63537
ttatttctgt	acgtgtacat	tcctcagatt	gtgcatctgc	ttcttccgcc	tcggcagcag	63597
ccgtctccag	ggaatccaaa	accttggcca	tgcgcgtag	ttgttcttcg	aggggcttta	63657
aacgacgatc	tatttccggt	ggtaacgtaa	tcgtttcccc	gcgaagggtg	tctaattgcg	63717
caacggccgc	cgcatttttt	aacgttaacg	tatttttttc	caaactcggga	ttcatacggc	63777
ctcttaactc	aaacgcggga	gccgtccagt	agtgtatggg	gaagttgggg	gctataaagt	63837
tcttagtggt	agacaaaaat	atcccacatt	tattcggaaa	cgagatagat	ccgaacccat	63897
atctcgccgt	catggtgtct	gcagcaaaca	aagtcaactg	gcgtgaatat	aaaccggtac	63957

tgctttaaaa gctgttttct taccatggg aaaacatccc gggtatactt tgtaaaattc	64017
caccacaagc acctaaagaa ggccttctaa ggggtaaatc caccaccaca gctgcatttt	64077
cttcaaactt tggttaaagcg gaacgatggc atgatttcgc acgctttttc gcaagagAAC	64137
atacgtgaat tttcttttttg catagacgtc ttcgctctct aacggacctt atcggggggg	64197
tatattccgc tacattctcc aaatgcgacg ctagcataac aaggtttcca tgaatcacct	64257
ttgggggtaa ccgagttacc tgtaacaggt tcagaccccc ttgagataca aacacaagga	64317
gggggggtcac cattatttca tcagatcccc tgggtgtggt ttcctttatt aaagccatgg	64377
tatccctcag ctggcgcata ccctcgcaaa actgggtgata cttagtaggg gtatgtatat	64437
tagcgctaaa acggcaagat tttaattcca ctataaaaca aacgggtcttt ccggcaccac	64497
tggattccgt ttgtataata caaacacaat cggggcgctcg gcgtcccaaa tttacttcaa	64557
acgacattga tatgcgtaca gccctttgaa catccacgtg ggataacggc gacaggagtt	64617
ttgccagcct cgggttgaac gcgtccgcga aacctcgacg tacgttatca atatcctttt	64677
tgagtacatc gtaaaaacga gtgtggcaac gttgtcccaa acgaaaacac ttggcccgaa	64737
ttcgactagc ggacatattt gaagttccgt ccagaagat aacctaagac gcgtttgtct	64797
acaataaac atg tca acg gat aaa acc gat gta aaa atg ggc gtt	64842
Met Ser Thr Asp Lys Thr Asp Val Lys Met Gly Val	
10905 10910 10915	
ttg cgt att tat ttg gac ggg gcg tat gga att gga aaa aca acc	64887
Leu Arg Ile Tyr Leu Asp Gly Ala Tyr Gly Ile Gly Lys Thr Thr	
10920 10925 10930	
gcc gcc gaa gaa ttt tta cac cac ttt gca ata aca cca aac cgg	64932
Ala Ala Glu Glu Phe Leu His His Phe Ala Ile Thr Pro Asn Arg	
10935 10940 10945	
atc tta ctc att ggg gag ccc ctg tcg tat tgg cgt aac ctt gca	64977
Ile Leu Leu Ile Gly Glu Pro Leu Ser Tyr Trp Arg Asn Leu Ala	
10950 10955 10960	
ggg gag gac gcc att tgc gga att tac gga aca caa act cgc cgt	65022
Gly Glu Asp Ala Ile Cys Gly Ile Tyr Gly Thr Gln Thr Arg Arg	
10965 10970 10975	
ctt aat gga gac gtt tcg cct gaa gac gca caa cgc ctc acg gct	65067
Leu Asn Gly Asp Val Ser Pro Glu Asp Ala Gln Arg Leu Thr Ala	
10980 10985 10990	
cat ttt cag agc ctg ttc tgt tct ccg cat gca att atg cat gcg	65112
His Phe Gln Ser Leu Phe Cys Ser Pro His Ala Ile Met His Ala	
10995 11000 11005	
aaa atc tcg gca ttg atg gac aca agt aca tcg gat ctc gta caa	65157
Lys Ile Ser Ala Leu Met Asp Thr Ser Thr Ser Asp Leu Val Gln	
11010 11015 11020	

gta aat aag gag ccg	tat aaa att atg tta	tcc gac cga cac cca	65202
Val Asn Lys Glu Pro	Tyr Lys Ile Met Leu	Ser Asp Arg His Pro	
11025	11030	11035	
atc gcc tca act ata	tgt ttt ccc ttg tcc	aga tac tta gtg gga	65247
Ile Ala Ser Thr Ile	Cys Phe Pro Leu Ser	Arg Tyr Leu Val Gly	
11040	11045	11050	
gat atg tcc cca gcg	gcg ctt cct ggg tta	ttg ttt acg ctt ccc	65292
Asp Met Ser Pro Ala	Ala Leu Pro Gly Leu	Leu Phe Thr Leu Pro	
11055	11060	11065	
gct gaa ccc ccc ggg	acc aac ttg gta gtt	tgt acc gtt tca ctc	65337
Ala Glu Pro Pro Gly	Thr Asn Leu Val Val	Cys Thr Val Ser Leu	
11070	11075	11080	
ccc agt cat tta tcc	aga gta agc aaa cgg	gcc aga ccg gga gaa	65382
Pro Ser His Leu Ser	Arg Val Ser Lys Arg	Ala Arg Pro Gly Glu	
11085	11090	11095	
acg gtt aat ctg ccg	ttt gtt atg gtt ctg	aga aat gta tat ata	65427
Thr Val Asn Leu Pro	Phe Val Met Val Leu	Arg Asn Val Tyr Ile	
11100	11105	11110	
atg ctt att aat aca	att ata ttt ctt aaa	act aac aac tgg cac	65472
Met Leu Ile Asn Thr	Ile Ile Phe Leu Lys	Thr Asn Asn Trp His	
11115	11120	11125	
gcg ggc tgg aac aca	ctg tca ttt tgt aat	gat gta ttt aaa cag	65517
Ala Gly Trp Asn Thr	Leu Ser Phe Cys Asn	Asp Val Phe Lys Gln	
11130	11135	11140	
aaa tta caa aaa tcc	gag tgt ata aaa cta	cgc gaa gta cct ggg	65562
Lys Leu Gln Lys Ser	Glu Cys Ile Lys Leu	Arg Glu Val Pro Gly	
11145	11150	11155	
att gaa gac acg tta	ttc gcc gtg ctt aaa	ctt ccg gag ctt tgc	65607
Ile Glu Asp Thr Leu	Phe Ala Val Leu Lys	Leu Pro Glu Leu Cys	
11160	11165	11170	
gga gag ttt gga aat	att ctg ccg tta tgg	gca tgg gga atg gag	65652
Gly Glu Phe Gly Asn	Ile Leu Pro Leu Trp	Ala Trp Gly Met Glu	
11175	11180	11185	
acc ctt tca aac tgc	tca cga agc atg tct	ccg ttc gta tta tcg	65697
Thr Leu Ser Asn Cys	Ser Arg Ser Met Ser	Pro Phe Val Leu Ser	
11190	11195	11200	
tta gaa cag aca ccc	cag cat gcg gca caa	gaa cta aaa act ctg	65742
Leu Glu Gln Thr Pro	Gln His Ala Ala Gln	Glu Leu Lys Thr Leu	
11205	11210	11215	
cta ccc cag atg acc	ccg gca aac atg tcc	tcc ggt gca tgg aat	65787
Leu Pro Gln Met Thr	Pro Ala Asn Met Ser	Ser Gly Ala Trp Asn	
11220	11225	11230	
ata ttg aaa gag ctt	gtt aat gcc gtt cag	gac aac act tcc taa	65832
Ile Leu Lys Glu Leu	Val Asn Ala Val Gln	Asp Asn Thr Ser	
11235	11240		

atatacctag	tattttacgta	tgtaccagta	aaaagatgat	acacattgtc	atactcgcgt	65892
gtacgtgttt	ttcttttttta	tatatgcgtc	atttattacc	acatccttta	atcccgcctt	65952
tatctcccta	aaacggagtg	gtaatattaa	aagccgccaa	gcctgttggt	gggtgaggag	66012
gggtaaaggc	acgctgtgtg	cataacgttg	cggtgatatt	gtagcgcaag	taacagcgac	66072
t atg	ttt gcg cta gtt tta	gcg gtg gta att ctt	cct ctt tgg	66115		
Met	Phe Ala Leu Val Leu	Ala Val Val Ile Leu	Pro Leu Trp			
11245	11250	11255				
acc acg	gct aat aaa tct tac	gta aca cca acc cct	gcg act cgc	66160		
Thr Thr	Ala Asn Lys Ser Tyr	Val Thr Pro Thr Pro	Ala Thr Arg			
11260	11265	11270				
tct atc	gga cat atg tct gct	ctt cta cga gaa tat	tcc gac cgt	66205		
Ser Ile	Gly His Met Ser Ala	Leu Leu Arg Glu Tyr	Ser Asp Arg			
11275	11280	11285				
aat atg	tct ctg aaa tta gaa	gcc ttt tat cct act	ggg ttc gat	66250		
Asn Met	Ser Leu Lys Leu Glu	Ala Phe Tyr Pro Thr	Gly Phe Asp			
11290	11295	11300				
gaa gaa	ctc att aaa tca ctt	cac tgg gga aat gat	aga aaa cac	66295		
Glu Glu	Leu Ile Lys Ser Leu	His Trp Gly Asn Asp	Arg Lys His			
11305	11310	11315				
gtt ttc	ttg gtt att gtt aag	gtt aac cct aca aca	cac gaa gga	66340		
Val Phe	Leu Val Ile Val Lys	Val Asn Pro Thr Thr	His Glu Gly			
11320	11325	11330				
gac gtc	ggg ctg gtt ata ttt	cca aaa tac ttg tta	tcg cca tac	66385		
Asp Val	Gly Leu Val Ile Phe	Pro Lys Tyr Leu Leu	Ser Pro Tyr			
11335	11340	11345				
cat ttc	aaa gca gaa cat cga	gca ccg ttt cct gct	gga cgt ttt	66430		
His Phe	Lys Ala Glu His Arg	Ala Pro Phe Pro Ala	Gly Arg Phe			
11350	11355	11360				
gga ttt	ctt agt cac cct gtg	aca ccc gac gtg agc	ttc ttt gac	66475		
Gly Phe	Leu Ser His Pro Val	Thr Pro Asp Val Ser	Phe Phe Asp			
11365	11370	11375				
agt tcg	ttt gcg ccg tat tta	act acg caa cat ctt	gtt gcg ttt	66520		
Ser Ser	Phe Ala Pro Tyr Leu	Thr Thr Gln His Leu	Val Ala Phe			
11380	11385	11390				
act acg	ttc cca cca aac ccc	ctt gta tgg cat ttg	gaa aga gct	66565		
Thr Thr	Phe Pro Pro Asn Pro	Leu Val Trp His Leu	Glu Arg Ala			
11395	11400	11405				
gag acc	gca gca act gca gaa	agg ccg ttt ggg gta	agt ctt tta	66610		
Glu Thr	Ala Ala Thr Ala Glu	Arg Pro Phe Gly Val	Ser Leu Leu			
11410	11415	11420				
ccc gct	cgc cca aca gtc ccc	aag aat act att ctg	gaa cat aaa	66655		
Pro Ala	Arg Pro Thr Val Pro	Lys Asn Thr Ile Leu	Glu His Lys			
11425	11430	11435				

gcg cat Ala His 11440	ttt gct aca tgg gat Phe Ala Thr Trp Asp 11445	gcc ctt gcc cga cat Ala Leu Ala Arg His 11450	act ttt ttt Thr Phe Phe	66700
tct gcc Ser Ala 11455	gaa gca att atc acc Glu Ala Ile Ile Thr 11460	aac tca acg ttg aga Asn Ser Thr Leu Arg 11465	ata cac gtt Ile His Val	66745
ccc ctt Pro Leu 11470	ttt ggg tcg gta tgg Phe Gly Ser Val Trp 11475	cca att cga tac tgg Pro Ile Arg Tyr Trp 11480	gcc acc ggt Ala Thr Gly	66790
tcg gtg Ser Val 11485	ctt ctc aca agc gac Leu Leu Thr Ser Asp 11490	tcg ggt cgt gtg gaa Ser Gly Arg Val Glu 11495	gta aat att Val Asn Ile	66835
ggt gta Gly Val 11500	gga ttt atg agc tcg Gly Phe Met Ser Ser 11505	ctc att tct tta tcc Leu Ile Ser Leu Ser 11510	tct gga cca Ser Gly Pro	66880
ccg ata Pro Ile 11515	gaa tta att gtt gta Glu Leu Ile Val Val 11520	cca cat aca gta aaa Pro His Thr Val Lys 11525	ctg aac gcg Leu Asn Ala	66925
gtt aca Val Thr 11530	agc gac acc aca tgg Ser Asp Thr Thr Trp 11535	ttc cag cta aat cca Phe Gln Leu Asn Pro 11540	ccg ggt ccg Pro Gly Pro	66970
gat ccg Asp Pro 11545	ggg cca tct tat cga Gly Pro Ser Tyr Arg 11550	gtt tat tta ctt gga Val Tyr Leu Leu Gly 11555	cgt ggg ttg Arg Gly Leu	67015
gat atg Asp Met 11560	aat ttt tca aag cat Asn Phe Ser Lys His 11565	gct acg gtc gat ata Ala Thr Val Asp Ile 11570	tgc gca tat Cys Ala Tyr	67060
ccc gaa Pro Glu 11575	gag agt ttg gat tac Glu Ser Leu Asp Tyr 11580	cgc tat cat tta tcc Arg Tyr His Leu Ser 11585	atg gcc cac Met Ala His	67105
acg gag Thr Glu 11590	gct ctg cgg atg aca Ala Leu Arg Met Thr 11595	acg aag gcg gat caa Thr Lys Ala Asp Gln 11600	cat gac ata His Asp Ile	67150
aac gag Asn Glu 11605	gaa agc tat tac cat Glu Ser Tyr Tyr His 11610	atc gcc gca aga ata Ile Ala Ala Arg Ile 11615	gcc aca tca Ala Thr Ser	67195
att ttt Ile Phe 11620	gcg ttg tcg gaa atg Ala Leu Ser Glu Met 11625	ggc cgt acc aca gaa Gly Arg Thr Thr Glu 11630	tat ttt ctg Tyr Phe Leu	67240
tta gat Leu Asp 11635	gag atc gta gat gtt Glu Ile Val Asp Val 11640	cag tat caa tta aaa Gln Tyr Gln Leu Lys 11645	ttc ctt aat Phe Leu Asn	67285
tac att Tyr Ile 11650	tta atg cgg ata gga Leu Met Arg Ile Gly 11655	gca gga gct cat ccc Ala Gly Ala His Pro 11660	aac act ata Asn Thr Ile	67330

tcc gga Ser Gly 11665	acc tcg gat ctg atc Thr Ser Asp Leu Ile 11670	ttt gcc gat cca tcg Phe Ala Asp Pro Ser 11675	cag ctt cat Gln Leu His	67375
gac gaa Asp Glu 11680	ctt tca ctt ctt ttt Leu Ser Leu Leu Phe 11685	ggc cag gta aaa ccc Gly Gln Val Lys Pro 11690	gca aat gtc Ala Asn Val	67420
gat tat Asp Tyr 11695	ttt att tca tat gat Phe Ile Ser Tyr Asp 11700	gaa gcc cgt gat caa Glu Ala Arg Asp Gln 11705	cta aag acc Leu Lys Thr	67465
gca tac Ala Tyr 11710	gcg ctt tcc cgt ggt Ala Leu Ser Arg Gly 11715	caa gac cat gtg aat Gln Asp His Val Asn 11720	gca ctt tct Ala Leu Ser	67510
ctc gcc Leu Ala 11725	agg cgt gtt ata atg Arg Arg Val Ile Met 11730	agc ata tac aag ggg Ser Ile Tyr Lys Gly 11735	ctg ctt gtg Leu Leu Val	67555
aag caa Lys Gln 11740	aat tta aat gct aca Asn Leu Asn Ala Thr 11745	gag agg cag gct tta Glu Arg Gln Ala Leu 11750	ttt ttt gcc Phe Phe Ala	67600
tca atg Ser Met 11755	att tta tta aat ttc Ile Leu Leu Asn Phe 11760	cgc gaa gga cta gaa Arg Glu Gly Leu Glu 11765	aat tca tct Asn Ser Ser	67645
cgg gta Arg Val 11770	tta gac ggt cgc aca Leu Asp Gly Arg Thr 11775	act ttg ctt tta atg Thr Leu Leu Leu Met 11780	aca tcc atg Thr Ser Met	67690
tgt acg Cys Thr 11785	gca gct cac gcc acg Ala Ala His Ala Thr 11790	caa gca gca ctt aac Gln Ala Ala Leu Asn 11795	ata caa gaa Ile Gln Glu	67735
ggc ctg Gly Leu 11800	gca tac tta aat cct Ala Tyr Leu Asn Pro 11805	tca aaa cac atg ttt Ser Lys His Met Phe 11810	aca ata cca Thr Ile Pro	67780
aac gta Asn Val 11815	tac agt cct tgt atg Tyr Ser Pro Cys Met 11820	ggc tcc ctt cgt aca Gly Ser Leu Arg Thr 11825	gac ctc acg Asp Leu Thr	67825
gaa gag Glu Glu 11830	att cat gtt atg aat Ile His Val Met Asn 11835	ctc ctg tcg gca ata Leu Leu Ser Ala Ile 11840	cca aca cgc Pro Thr Arg	67870
cca gga Pro Gly 11845	ctt aac gag gta ttg Leu Asn Glu Val Leu 11850	cat acc caa cta gac His Thr Gln Leu Asp 11855	gaa tct gaa Glu Ser Glu	67915
ata ttc Ile Phe 11860	gac gcg gca ttt aaa Asp Ala Ala Phe Lys 11865	acc atg atg att ttt Thr Met Met Ile Phe 11870	acc aca tgg Thr Thr Trp	67960
act gcc Thr Ala 11875	aaa gat ttg cat ata Lys Asp Leu His Ile 11880	ctc cac acc cat gta Leu His Thr His Val 11885	cca gaa gta Pro Glu Val	68005

ttt acg	tgt caa gat gca gcc	gcg cgt aac gga gaa	tat gtg ctc	68050
Phe Thr	Cys Gln Asp Ala Ala	Ala Arg Asn Gly Glu	Tyr Val Leu	
11890	11895	11900		
att ctt	cca gct gtc cag gga	cac agt tat gtg att	aca cga aac	68095
Ile Leu	Pro Ala Val Gln Gly	His Ser Tyr Val Ile	Thr Arg Asn	
11905	11910	11915		
aaa cct	caa agg ggt ttg gta	tat tcc ctg gca gat	gtg gat gta	68140
Lys Pro	Gln Arg Gly Leu Val	Tyr Ser Leu Ala Asp	Val Asp Val	
11920	11925	11930		
tat aac	ccc ata tcc gtt gtt	tat tta agc agg gat	act tgc gtg	68185
Tyr Asn	Pro Ile Ser Val Val	Tyr Leu Ser Arg Asp	Thr Cys Val	
11935	11940	11945		
tct gaa	cat ggt gtc ata gag	acg gtc gca ctg ccc	cat ccg gac	68230
Ser Glu	His Gly Val Ile Glu	Thr Val Ala Leu Pro	His Pro Asp	
11950	11955	11960		
aat tta	aaa gaa tgt ttg tat	tgc gga agt gtt ttt	ctt agg tat	68275
Asn Leu	Lys Glu Cys Leu Tyr	Cys Gly Ser Val Phe	Leu Arg Tyr	
11965	11970	11975		
cta acc	acg ggg gcg att atg	gat ata att att att	gac agc aaa	68320
Leu Thr	Thr Gly Ala Ile Met	Asp Ile Ile Ile Ile	Asp Ser Lys	
11980	11985	11990		
gat aca	gaa cga caa cta gcc	gct atg gga aac tcc	aca att cca	68365
Asp Thr	Glu Arg Gln Leu Ala	Ala Met Gly Asn Ser	Thr Ile Pro	
11995	12000	12005		
ccc ttc	aat cca gac atg cac	ggg gat gac tct aag	gct gtg ttg	68410
Pro Phe	Asn Pro Asp Met His	Gly Asp Asp Ser Lys	Ala Val Leu	
12010	12015	12020		
ttg ttt	cca aac gga act gtg	gta acg ctt cta gga	ttc gaa cga	68455
Leu Phe	Pro Asn Gly Thr Val	Val Thr Leu Leu Gly	Phe Glu Arg	
12025	12030	12035		
cga caa	gcc ata cga atg tcg	gga caa tac ctt ggg	gcc tct tta	68500
Arg Gln	Ala Ile Arg Met Ser	Gly Gln Tyr Leu Gly	Ala Ser Leu	
12040	12045	12050		
gga ggg	gcg ttt ctg gcg gta	gtg ggg ttt ggt att	atc gga tgg	68545
Gly Gly	Ala Phe Leu Ala Val	Val Gly Phe Gly Ile	Ile Gly Trp	
12055	12060	12065		
atg tta	tgt gga aat tcc cgc	ctt cga gaa tat aat	aaa ata cct	68590
Met Leu	Cys Gly Asn Ser Arg	Leu Arg Glu Tyr Asn	Lys Ile Pro	
12070	12075	12080		
ctg aca	taa aaaacatgta taataaaaag	tcactataaaa cgtattctct		68639
Leu Thr				
12085				
acaataacttt attcgcgaaat aatacacact acctttgggt	ttttttcccg tccccaaatg			68699
gtgtttgggtg cactctacca aaaaatagag cgcctaaata	tgctatatataa cgcctcccag			68759

caaaatacgg	ttcaaaggca	ttacccgata	ttgtattgta	gtacagggca	atgggaattg	68819
atgatcccaa	taaacggcat	agacgcacag	cgccgttata	gcaggggtct	ccagagtaca	68879
gggtatctaa	gtaccgggat	atctcatact	catgcctttc	cgtgacagaa	acatcaaccg	68939
gaacagtatc	cgataaacca	actcctgttt	ttgcaaggcg	taaaattcgc	acaccttcct	68999
tttttgcaag	atgtgacgtt	tccttgtaac	agggaagctg	ggggagtggg	aagaacaaca	69059
aagtttcagc	caacgtgcc	ataaagccca	cttcctcaa	gaggctgttt	gctgtatcca	69119
caatgggtccg	tattaaatct	tgagcaactt	gatccgtgtc	atcatcactg	ggtaacgcgt	69179
taacataact	acgcgttaaa	tcttcaataa	cggcataaca	attaaacgct	tcccaccgag	69239
acagtatata	ttgaacaatc	acgaaccgtt	gacaggacgt	cagatcacgt	ccgtaagcat	69299
gcccgaaaaa	tggaagtcc	ccccgttcgc	catataccgc	aacaactgca	gtatatatcg	69359
tctcacgggc	ttcattaagt	tcattctcaa	gtccaggcca	ttttctgggt	ttaaatataa	69419
cctcgtccgc	aaaaaaaaacc	gcacatgata	acgcgcggat	acaatgagta	gtggctttat	69479
ggcgaggatc	ccaaatgtcc	attaccggg	ggatggctct	aatctgtaca	aagttactta	69539
gtgtaatatg	atcggacttc	ttacgccgtc	taggctgttt	ctcagaatac	ggttcaccgc	69599
aaatcggcac	atcatctgct	tttacgtctt	ccgtaaccac	atcagcagcg	cgccgactaa	69659
caattatact	tgttttttca	tcgtcggttac	ttccgttaag	cgcgtctcgt	atctcgggcg	69719
tcccgtcgaa	taatccactc	actagctcct	gcaaactttc	tggttaactcc	aacatacgca	69779
tatacaccaa	tgaaaaactg	gcttcgtttg	gtacgtacat	aaagccattt	gtgggtattaa	69839
tggcggtggg	tgttggaaac	aatttttagct	tattctcgcg	cgtaacatct	acccccgcca	69899
ccaatgttaa	atgcgtcacg	gggagggaca	cgagataatc	tgcgagcgta	gggtcctcca	69959
cttcaacatc	aatgtttccg	caaaggctgc	gatccaccgc	ccccgatccc	gctgcaagta	70019
aggccactcg	atccaaaaac	acgcagttat	tattggatga	taccgcccac	gtcttcccgc	70079
tgcgattgag	ctcacttcga	acgtaactgg	caacagatct	gtcaccgggt	ccgacccgcg	70139
gaacaacatg	tccaaatttt	gcgatctcgc	ctccatgttt	gcgggggtatg	gaaattaagc	70199
atcccccgca	tataaaatac	gccctggtag	cacgctcgtt	aaaataaaac	gttacgccgt	70259
tataagatac	ggttgaatga	tatggaaatt	ccatattaaa	gcgtttatcg	gaacattaac	70319
ctcgaacttg	ccgtcccgtg	atcgtgtgat	cgccaacctt	aggtccacac	cgaatatgag	70379
aaatatataa	ctacacgcaa	acattcaaaa	caccgtggta	tcattaacgt	catatgaaaa	70439
gatccaatca	atccaatcaa	ccacacctcc	taccgttttag	cacgtcagct	atgtgacatg	70499
ctccaaacat	acgtaaacat	ttagagaggg	tgttataaca	gtctgtcagg	cggggtatat	70559

tctacataat acaaggatcg gctttaactt tgtcaacatt tttactttgg actataaact	70619
gcgactgaac gtt atg aac cca ccc caa gcc cgc gtc tcg gaa cag	70665
Met Asn Pro Pro Gln Ala Arg Val Ser Glu Gln	
12090 12095	
aca aag gac ttg ctt agc gtt atg gtt aac cag cac ccc gaa gag	70710
Thr Lys Asp Leu Leu Ser Val Met Val Asn Gln His Pro Glu Glu	
12100 12105 12110	
gac gca aaa gtg tgt aaa tcc agt gat aat tca ccg ctt tat aac	70755
Asp Ala Lys Val Cys Lys Ser Ser Asp Asn Ser Pro Leu Tyr Asn	
12115 12120 12125	
acc atg gtt atg tta tcg tat ggg ggt gat acg gac tta cta tta	70800
Thr Met Val Met Leu Ser Tyr Gly Gly Asp Thr Asp Leu Leu Leu	
12130 12135 12140	
agc tct gca tgt acc cgc aca tct acc gta aac agg tcg gcg ttt	70845
Ser Ser Ala Cys Thr Arg Thr Ser Thr Val Asn Arg Ser Ala Phe	
12145 12150 12155	
acg caa cac tcc gtg ttt tat att ata tcc acg gtg ttg att caa	70890
Thr Gln His Ser Val Phe Tyr Ile Ile Ser Thr Val Leu Ile Gln	
12160 12165 12170	
cca ata tgt tgt atc ttc ttt ttt ttt tac tat aaa gcg aca cgc	70935
Pro Ile Cys Cys Ile Phe Phe Phe Phe Tyr Tyr Lys Ala Thr Arg	
12175 12180 12185	
tgt atg ctc tta ttc aca gcc ggg tta ctt ctg acg att cta cat	70980
Cys Met Leu Leu Phe Thr Ala Gly Leu Leu Leu Thr Ile Leu His	
12190 12195 12200	
cac ttt cga ctt att att atg tta ttg tgt gtc tac aga aat ata	71025
His Phe Arg Leu Ile Ile Met Leu Leu Cys Val Tyr Arg Asn Ile	
12205 12210 12215	
cga tca gac ctg cta ccc tta tct aca tcc cag caa ctg ctg ctt	71070
Arg Ser Asp Leu Leu Pro Leu Ser Thr Ser Gln Gln Leu Leu Leu	
12220 12225 12230	
gga att att gtt gtg act cga aca atg cta ttt tgt att acg gcg	71115
Gly Ile Ile Val Val Thr Arg Thr Met Leu Phe Cys Ile Thr Ala	
12235 12240 12245	
tat tat act ctt ttt ata gac acc cgg gtg ttc ttt ttg att acc	71160
Tyr Tyr Thr Leu Phe Ile Asp Thr Arg Val Phe Phe Leu Ile Thr	
12250 12255 12260	
gga cac ttg caa agt gag gtt att ttt cca gat agc gtt tca aaa	71205
Gly His Leu Gln Ser Glu Val Ile Phe Pro Asp Ser Val Ser Lys	
12265 12270 12275	
ata ctt cct gtg tcg tgg ggt cca agt cca gcc gtg tta ctg gta	71250
Ile Leu Pro Val Ser Trp Gly Pro Ser Pro Ala Val Leu Leu Val	
12280 12285 12290	
atg gcg gca gtt att tac gct atg gac tgt ttg gtg gac acg gta	71295
Met Ala Ala Val Ile Tyr Ala Met Asp Cys Leu Val Asp Thr Val	

12295	12300	12305	
tcc ttt att ggg cca agg gtg tgg gtc	cgt gtt atg tta aaa aca	71340	
Ser Phe Ile Gly Pro Arg Val Trp Val	Arg Val Met Leu Lys Thr		
12310	12315	12320	
tct att tcg ttt tag tccatttcaa taaatgtact	ataattgttc agtctaataaaa	71395	
Ser Ile Ser Phe			
12325			
taatgttggg tattttataat taccgcccc	gtgttacttg gaaacaccca tacatatgtt	71455	
ccactctaca tcaaacttct cgcagttttc	ttgttcccgc acacgtttac acgtccggat	71515	
tcaagtcgca acgctgctga caaa atg aca acg gtt tca	tgt ccc gct aac	71566	
	Met Thr Thr Val Ser Cys Pro Ala Asn		
	12330		
gtg att act aca acg gaa tct gat cgt att gct	ggg tta ttt aac	71611	
Val Ile Thr Thr Thr Glu Ser Asp Arg Ile Ala	Gly Leu Phe Asn		
12335	12340	12345	
atc cca gcg ggg atc att cca act gga aat gtg	ctg tca acc ata	71656	
Ile Pro Ala Gly Ile Ile Pro Thr Gly Asn Val	Leu Ser Thr Ile		
12350	12355	12360	
gag gtg tgt gca cac cgt tgc att ttt gat ttt	ttt aaa caa ata	71701	
Glu Val Cys Ala His Arg Cys Ile Phe Asp Phe	Phe Lys Gln Ile		
12365	12370	12375	
cga tca gat gat aac agc ctt tac tcg gct caa	ttc gat att ctt	71746	
Arg Ser Asp Asp Asn Ser Leu Tyr Ser Ala Gln	Phe Asp Ile Leu		
12380	12385	12390	
ttg ggg aca tac tgc aat aca tta aac ttt gtg	cgt ttt cta gaa	71791	
Leu Gly Thr Tyr Cys Asn Thr Leu Asn Phe Val	Arg Phe Leu Glu		
12395	12400	12405	
ctt gga ctg tct gtc gct tgc atc tgt act aaa	ttt ccg gag ctg	71836	
Leu Gly Leu Ser Val Ala Cys Ile Cys Thr Lys	Phe Pro Glu Leu		
12410	12415	12420	
gct tac gtg cga gat ggc gtt att caa ttt gag	gta caa caa ccc	71881	
Ala Tyr Val Arg Asp Gly Val Ile Gln Phe Glu	Val Gln Gln Pro		
12425	12430	12435	
atg ata gca cgt gat ggc cca cat ccc gtc gat	cag cct gtt cat	71926	
Met Ile Ala Arg Asp Gly Pro His Pro Val Asp	Gln Pro Val His		
12440	12445	12450	
aat tat atg gtt aag cgg ata cac aag cgt tcg	tta agc gct gcg	71971	
Asn Tyr Met Val Lys Arg Ile His Lys Arg Ser	Leu Ser Ala Ala		
12455	12460	12465	
ttt gca att gca tcg gaa gcg ttg agt ttg tta	agt aac aca tat	72016	
Phe Ala Ile Ala Ser Glu Ala Leu Ser Leu Leu	Ser Asn Thr Tyr		
12470	12475	12480	
gtc gat ggg aca gag att gac tca tcg tta cgt	ata aga gct atc	72061	
Val Asp Gly Thr Glu Ile Asp Ser Ser Leu Arg	Ile Arg Ala Ile		

12485		12490		12495											
caa	cag	atg	gct	cgt	aat	tta	cgc	acc	gtt	ttg	gac	tca	ttt	gaa	72106
Gln	Gln	Met	Ala	Arg	Asn	Leu	Arg	Thr	Val	Leu	Asp	Ser	Phe	Glu	
12500					12505					12510					
cga	ggc	act	gcc	gat	caa	ctt	ctt	ggt	gtt	cta	ttg	gag	aaa	gcc	72151
Arg	Gly	Thr	Ala	Asp	Gln	Leu	Leu	Gly	Val	Leu	Leu	Glu	Lys	Ala	
12515					12520					12525					
cca	ccg	cta	tcg	ctg	ctt	tca	cca	att	aat	aaa	ttc	caa	ccc	gag	72196
Pro	Pro	Leu	Ser	Leu	Leu	Ser	Pro	Ile	Asn	Lys	Phe	Gln	Pro	Glu	
12530					12535					12540					
gga	cat	cta	aat	cgt	gtt	gca	cgc	gcg	gcc	cta	ctt	tcg	gac	ctc	72241
Gly	His	Leu	Asn	Arg	Val	Ala	Arg	Ala	Ala	Leu	Leu	Ser	Asp	Leu	
12545					12550					12555					
aaa	cgt	aga	gtc	tgt	gcg	gat	atg	ttt	ttt	atg	acc	cga	cac	gcc	72286
Lys	Arg	Arg	Val	Cys	Ala	Asp	Met	Phe	Phe	Met	Thr	Arg	His	Ala	
12560					12565					12570					
agg	gaa	cct	agg	ctg	atc	tct	gcg	tat	ctg	tcg	gat	atg	gtt	tcg	72331
Arg	Glu	Pro	Arg	Leu	Ile	Ser	Ala	Tyr	Leu	Ser	Asp	Met	Val	Ser	
12575					12580					12585					
tgc	acc	caa	cca	tcg	gtg	atg	gta	tca	cga	ata	act	cat	aca	aac	72376
Cys	Thr	Gln	Pro	Ser	Val	Met	Val	Ser	Arg	Ile	Thr	His	Thr	Asn	
12590					12595					12600					
act	cgc	gga	cgg	cag	gtt	gac	ggt	gtg	ttg	gta	aca	aca	gca	acc	72421
Thr	Arg	Gly	Arg	Gln	Val	Asp	Gly	Val	Leu	Val	Thr	Thr	Ala	Thr	
12605					12610					12615					
tta	aaa	cgg	caa	cta	tta	cag	gga	att	tta	caa	att	gac	gac	acc	72466
Leu	Lys	Arg	Gln	Leu	Leu	Gln	Gly	Ile	Leu	Gln	Ile	Asp	Asp	Thr	
12620					12625					12630					
gcc	gct	gac	gta	cca	gta	aca	tat	ggc	gaa	atg	gtt	cta	cag	ggg	72511
Ala	Ala	Asp	Val	Pro	Val	Thr	Tyr	Gly	Glu	Met	Val	Leu	Gln	Gly	
12635					12640					12645					
aca	aac	ttg	gta	acc	gcc	ctt	gtg	atg	gga	aag	gcc	gtc	cgc	gga	72556
Thr	Asn	Leu	Val	Thr	Ala	Leu	Val	Met	Gly	Lys	Ala	Val	Arg	Gly	
12650					12655					12660					
atg	gat	gat	gta	gcc	cgc	cat	ctc	ctt	gat	ata	acc	gac	cct	aac	72601
Met	Asp	Asp	Val	Ala	Arg	His	Leu	Leu	Asp	Ile	Thr	Asp	Pro	Asn	
12665					12670					12675					
acg	tta	aac	ata	ccg	tct	ata	ccc	cca	caa	tcc	aac	tcc	gat	tca	72646
Thr	Leu	Asn	Ile	Pro	Ser	Ile	Pro	Pro	Gln	Ser	Asn	Ser	Asp	Ser	
12680					12685					12690					
acg	aca	gct	ggg	ctt	ccg	gtt	aac	gcc	cgt	gtt	cct	gcg	gat	tta	72691
Thr	Thr	Ala	Gly	Leu	Pro	Val	Asn	Ala	Arg	Val	Pro	Ala	Asp	Leu	
12695					12700					12705					
gtg	att	gtt	ggg	gat	aaa	ctt	gta	ttc	tta	gaa	gca	tta	gaa	cgg	72736
Val	Ile	Val	Gly	Asp	Lys	Leu	Val	Phe	Leu	Glu	Ala	Leu	Glu	Arg	

12710		12715		12720	
cgg	gtc tac caa gct acg	cgc gtt gcc tac cct	ctt att gga aat	72781	
Arg	Val Tyr Gln Ala Thr	Arg Val Ala Tyr Pro	Leu Ile Gly Asn		
12725		12730		12735	
ata	gat att acg ttt atc	atg cca atg gga gtg	ttt cag gca aac	72826	
Ile	Asp Ile Thr Phe Ile	Met Pro Met Gly Val	Phe Gln Ala Asn		
12740		12745		12750	
tcc	atg gac aga tat aca	cga cac gcc ggc gat	ttt tca act gta	72871	
Ser	Met Asp Arg Tyr Thr	Arg His Ala Gly Asp	Phe Ser Thr Val		
12755		12760		12765	
tcc	gaa cag gat cca cgt	caa ttt cca ccc caa	ggg att ttt ttt	72916	
Ser	Glu Gln Asp Pro Arg	Gln Phe Pro Pro Gln	Gly Ile Phe Phe		
12770		12775		12780	
tat	aat aaa gat ggg ata	tta aca cag ttg act	ctt cgt gat gca	72961	
Tyr	Asn Lys Asp Gly Ile	Leu Thr Gln Leu Thr	Leu Arg Asp Ala		
12785		12790		12795	
atg	ggg acc atc tgc cac	agt tca ttg ctt gat	gtc gag gcc aca	73006	
Met	Gly Thr Ile Cys His	Ser Ser Leu Leu Asp	Val Glu Ala Thr		
12800		12805		12810	
ctt	gtt gcc ctc cgc caa	caa cat tta gat cgt	cag tgt tat ttt	73051	
Leu	Val Ala Leu Arg Gln	Gln His Leu Asp Arg	Gln Cys Tyr Phe		
12815		12820		12825	
ggg	gta tac gtg gcc gag	ggg aca gag gac aca	ttg gat gtt caa	73096	
Gly	Val Tyr Val Ala Glu	Gly Thr Glu Asp Thr	Leu Asp Val Gln		
12830		12835		12840	
atg	ggg agg ttt atg gaa	acg tgg gca gat atg	atg cct cat cac	73141	
Met	Gly Arg Phe Met Glu	Thr Trp Ala Asp Met	Met Pro His His		
12845		12850		12855	
cct	cat tgg gta aac gaa	cat tta aca att cta	cag ttt ata gct	73186	
Pro	His Trp Val Asn Glu	His Leu Thr Ile Leu	Gln Phe Ile Ala		
12860		12865		12870	
ccg	agc aac ccg cgt cta	agg ttt gaa tta aac	ccc gcc ttt gat	73231	
Pro	Ser Asn Pro Arg Leu	Arg Phe Glu Leu Asn	Pro Ala Phe Asp		
12875		12880		12885	
ttt	ttt gtt gca ccg ggg	gac gta gac ctt ccc	gga ccg cag cgt	73276	
Phe	Phe Val Ala Pro Gly	Asp Val Asp Leu Pro	Gly Pro Gln Arg		
12890		12895		12900	
ccc	ccg gaa gcc atg cca	acc gtt aac gca aca	tta cgg att atc	73321	
Pro	Pro Glu Ala Met Pro	Thr Val Asn Ala Thr	Leu Arg Ile Ile		
12905		12910		12915	
aac	gga aac att ccc gtg	cct cta tgt ccc att	tca ttt cga gac	73366	
Asn	Gly Asn Ile Pro Val	Pro Leu Cys Pro Ile	Ser Phe Arg Asp		
12920		12925		12930	
tgt	cgc gga acc caa ctc	ggg ttg gga aga cat	aca atg acc ccg	73411	
Cys	Arg Gly Thr Gln Leu	Gly Leu Gly Arg His	Thr Met Thr Pro		

12935		12940		12945	
gca acc att aaa gcc gta aag gat aca ttt gaa gac cgc gca tac 73456	Ala Thr Ile Lys Ala Val Lys Asp Thr Phe Glu Asp Arg Ala Tyr				
12950		12955		12960	
cca act att ttc tac atg cta gag gct gtt att cat gga aac gaa 73501	Pro Thr Ile Phe Tyr Met Leu Glu Ala Val Ile His Gly Asn Glu				
12965		12970		12975	
aga aac ttc tgt gcg tta ctg cga ctg tta aca cag tgt att cgc 73546	Arg Asn Phe Cys Ala Leu Leu Arg Leu Leu Thr Gln Cys Ile Arg				
12980		12985		12990	
ggg tat tgg gag caa tcc cac agg gtg gca ttt gta aat aac ttt 73591	Gly Tyr Trp Glu Gln Ser His Arg Val Ala Phe Val Asn Asn Phe				
12995		13000		13005	
cac atg tta atg tac ata act aca tat ctc gga aac ggt gag ctt 73636	His Met Leu Met Tyr Ile Thr Thr Tyr Leu Gly Asn Gly Glu Leu				
13010		13015		13020	
ccc gaa gtc tgt att aat ata tat cgg gat tta ctg cag cat gta 73681	Pro Glu Val Cys Ile Asn Ile Tyr Arg Asp Leu Leu Gln His Val				
13025		13030		13035	
aga gca tta cgc caa act ata acc gat ttt aca ata caa gga gag 73726	Arg Ala Leu Arg Gln Thr Ile Thr Asp Phe Thr Ile Gln Gly Glu				
13040		13045		13050	
ggc cat aac ggc gag acc tcg gaa gcg cta aat aac atc ctt acg 73771	Gly His Asn Gly Glu Thr Ser Glu Ala Leu Asn Asn Ile Leu Thr				
13055		13060		13065	
gat gac acg ttt att gca cct att cta tgg gat tgt gat gcg tta 73816	Asp Asp Thr Phe Ile Ala Pro Ile Leu Trp Asp Cys Asp Ala Leu				
13070		13075		13080	
ata tac cgt gat gaa gcc gcc cga gac cga ctc ccc gca att cgt 73861	Ile Tyr Arg Asp Glu Ala Ala Arg Asp Arg Leu Pro Ala Ile Arg				
13085		13090		13095	
gta agc ggg cga aac gga tac caa gcc ctt cac ttt gtg gat atg 73906	Val Ser Gly Arg Asn Gly Tyr Gln Ala Leu His Phe Val Asp Met				
13100		13105		13110	
gcc ggg cat aac ttc caa cga cgc gat aat gtg tta atc cac ggg 73951	Ala Gly His Asn Phe Gln Arg Arg Asp Asn Val Leu Ile His Gly				
13115		13120		13125	
aga ccc gtt cgg gga gac acg ggt cag ggt att ccc att act cca 73996	Arg Pro Val Arg Gly Asp Thr Gly Gln Gly Ile Pro Ile Thr Pro				
13130		13135		13140	
cac cat gac cgt gaa tgg ggt att ctc tcc aag att tac tac tat 74041	His His Asp Arg Glu Trp Gly Ile Leu Ser Lys Ile Tyr Tyr Tyr				
13145		13150		13155	
att gtc att cct gca ttt tcc cgc ggt tcc tgt tgt aca atg ggc 74086	Ile Val Ile Pro Ala Phe Ser Arg Gly Ser Cys Cys Thr Met Gly				

13160		13165		13170	
gtg	cgt tat gat cgc cta	tac cct gcg tta cag	gca gtt atc gtt	74131	
Val	Arg Tyr Asp Arg Leu	Tyr Pro Ala Leu Gln	Ala Val Ile Val		
13175		13180		13185	
ccg	gaa att ccc gct gat	gaa gaa gcc cca act	acc cca gaa gat	74176	
Pro	Glu Ile Pro Ala Asp	Glu Glu Ala Pro Thr	Thr Pro Glu Asp		
13190		13195		13200	
cca	aga cac cct ctt cac	gca cac caa ctc gtt	ccg aac tct ctt	74221	
Pro	Arg His Pro Leu His	Ala His Gln Leu Val	Pro Asn Ser Leu		
13205		13210		13215	
aac	gtt tac ttc cat aat	gca cac cta acc gtt	gat ggt gat gca	74266	
Asn	Val Tyr Phe His Asn	Ala His Leu Thr Val	Asp Gly Asp Ala		
13220		13225		13230	
ttg	ctc aca cta caa gag	tta atg gga gat atg	gct gaa cga acg	74311	
Leu	Leu Thr Leu Gln Glu	Leu Met Gly Asp Met	Ala Glu Arg Thr		
13235		13240		13245	
acg	gcc att tta gta tca	agc gcc ccc gat gcg	gga gcc gcc acg	74356	
Thr	Ala Ile Leu Val Ser	Ser Ala Pro Asp Ala	Gly Ala Ala Thr		
13250		13255		13260	
gca	aca acc aga aat atg	aga ata tat gac gga	gcg ctt tac cat	74401	
Ala	Thr Thr Arg Asn Met	Arg Ile Tyr Asp Gly	Ala Leu Tyr His		
13265		13270		13275	
ggc	ctt att atg atg gca	tat cag gcg tac gat	gaa acc att gca	74446	
Gly	Leu Ile Met Met Ala	Tyr Gln Ala Tyr Asp	Glu Thr Ile Ala		
13280		13285		13290	
acg	ggt act ttt ttt tat	ccc gtt ccg gtc aac	cct ctg ttt gca	74491	
Thr	Gly Thr Phe Phe Tyr	Pro Val Pro Val Asn	Pro Leu Phe Ala		
13295		13300		13305	
tgt	ccg gaa cat ttg gca	tca ttg cgt gga atg	aca aat gct agg	74536	
Cys	Pro Glu His Leu Ala	Ser Leu Arg Gly Met	Thr Asn Ala Arg		
13310		13315		13320	
cgg	gtt ttg gca aaa atg	gta cca cca atc cct	cct ttt ctg gga	74581	
Arg	Val Leu Ala Lys Met	Val Pro Pro Ile Pro	Pro Phe Leu Gly		
13325		13330		13335	
gcc	aac cac cac gca act	ata cgc caa ccc gtt	gcc tac cat gta	74626	
Ala	Asn His His Ala Thr	Ile Arg Gln Pro Val	Ala Tyr His Val		
13340		13345		13350	
acg	cat agt aag tcg gat	ttt aat act ctt aca	tat tct ctt ctt	74671	
Thr	His Ser Lys Ser Asp	Phe Asn Thr Leu Thr	Tyr Ser Leu Leu		
13355		13360		13365	
gga	ggg tat ttt aag ttt	aca cca ata tct ctt	aca cat caa cta	74716	
Gly	Gly Tyr Phe Lys Phe	Thr Pro Ile Ser Leu	Thr His Gln Leu		
13370		13375		13380	
cga	acg gga ttt cac ccc	ggg att gcc ttt acc	gta gtg cgc cag	74761	
Arg	Thr Gly Phe His Pro	Gly Ile Ala Phe Thr	Val Val Arg Gln		

13385		13390		13395	
gat	cgc ttt gcc aca gag	caa ctt tta tat gcc	gag cgt gct tct	74806	
Asp	Arg Phe Ala Thr Glu	Gln Leu Leu Tyr Ala	Glu Arg Ala Ser		
13400		13405		13410	
gaa	tcg tac ttt gtc gga	caa atc caa gta cac	cat cat gat gct	74851	
Glu	Ser Tyr Phe Val Gly	Gln Ile Gln Val His	His His Asp Ala		
13415		13420		13425	
att	ggg ggg gta aac ttt	acc cta acc caa ccc	aga gct cac gtg	74896	
Ile	Gly Gly Val Asn Phe	Thr Leu Thr Gln Pro	Arg Ala His Val		
13430		13435		13440	
gac	ctg gga gtc ggg tat	aca gct gta tgt gcc	aca gca gcc ctg	74941	
Asp	Leu Gly Val Gly Tyr	Thr Ala Val Cys Ala	Thr Ala Ala Leu		
13445		13450		13455	
cga	tgc cct ctc acg gat	atg ggc aat act gcc	caa aat ctt ttt	74986	
Arg	Cys Pro Leu Thr Asp	Met Gly Asn Thr Ala	Gln Asn Leu Phe		
13460		13465		13470	
ttt	tca cga gga gga gtg	cca atg tta cat gat	aac gtt acc gaa	75031	
Phe	Ser Arg Gly Gly Val	Pro Met Leu His Asp	Asn Val Thr Glu		
13475		13480		13485	
tcg	ttg cgt cgt ata aca	gca tcg ggg ggt cgc	tta aat ccc acc	75076	
Ser	Leu Arg Arg Ile Thr	Ala Ser Gly Gly Arg	Leu Asn Pro Thr		
13490		13495		13500	
gaa	ccc cta ccc atc ttc	ggc gga cta cgt cct	gct aca tcg gca	75121	
Glu	Pro Leu Pro Ile Phe	Gly Gly Leu Arg Pro	Ala Thr Ser Ala		
13505		13510		13515	
gga	att gca cga ggg caa	gcc tct gtg tgt gag	ttt gtg gcc atg	75166	
Gly	Ile Ala Arg Gly Gln	Ala Ser Val Cys Glu	Phe Val Ala Met		
13520		13525		13530	
ccg	gtg tcc act gac cta	caa tat ttt aga act	gca tgc aat cct	75211	
Pro	Val Ser Thr Asp Leu	Gln Tyr Phe Arg Thr	Ala Cys Asn Pro		
13535		13540		13545	
aga	ggc cga gca tct gga	atg tta tat atg ggt	gac cgt gac gcc	75256	
Arg	Gly Arg Ala Ser Gly	Met Leu Tyr Met Gly	Asp Arg Asp Ala		
13550		13555		13560	
gac	ata gag gct ata atg	ttt gat cac aca caa	tcg gat gtt gct	75301	
Asp	Ile Glu Ala Ile Met	Phe Asp His Thr Gln	Ser Asp Val Ala		
13565		13570		13575	
tat	aca gat cga gca act	ctt aac cca tgg gca	tca caa aaa cat	75346	
Tyr	Thr Asp Arg Ala Thr	Leu Asn Pro Trp Ala	Ser Gln Lys His		
13580		13585		13590	
tca	tac ggt gac agg cta	tac aac gga aca tac	aac ctt aca ggc	75391	
Ser	Tyr Gly Asp Arg Leu	Tyr Asn Gly Thr Tyr	Asn Leu Thr Gly		
13595		13600		13605	
gct	tct cct atc tac agc	cca tgc ttt aag ttt	ttt aca cca gcg	75436	
Ala	Ser Pro Ile Tyr Ser	Pro Cys Phe Lys Phe	Phe Thr Pro Ala		

13610		13615		13620		
gag	gtt aac act aat tgt	aat aca ctg gat	cgg	ctt cta atg gag	75481	
Glu	Val Asn Thr Asn Cys	Asn Thr Leu Asp	Arg	Leu Leu Met Glu		
13625		13630		13635		
gca	aag gct gtg gcg tcg	caa agc tcc acc	gac	act gaa tat caa	75526	
Ala	Lys Ala Val Ala Ser	Gln Ser Ser Thr	Asp	Thr Glu Tyr Gln		
13640		13645		13650		
ttt	aaa cgc cct ccc ggt	tct acc gaa atg	aca	cag gat ccg tgt	75571	
Phe	Lys Arg Pro Pro Gly	Ser Thr Glu Met	Thr	Gln Asp Pro Cys		
13655		13660		13665		
ggc	ctt ttt caa gaa gca	tat cca cca cta	tgc	tca agc gat gcg	75616	
Gly	Leu Phe Gln Glu Ala	Tyr Pro Pro Leu	Cys	Ser Ser Asp Ala		
13670		13675		13680		
gcc	atg tta cga acg gct	cac gcg gga gaa	acc	ggg gca gat gaa	75661	
Ala	Met Leu Arg Thr Ala	His Ala Gly Glu	Thr	Gly Ala Asp Glu		
13685		13690		13695		
gtt	cac tta gcc caa tat	ctg att cga gac	gcg	tcg ccc ctt agg	75706	
Val	His Leu Ala Gln Tyr	Leu Ile Arg Asp	Ala	Ser Pro Leu Arg		
13700		13705		13710		
gga	tgt ctt cct ctt ccg	cga taa tttcaccacg	cccacatacc		75750	
Gly	Cys Leu Pro Leu Pro	Arg				
13715		13720				
cactcccaat	aaaagccctg	tagagcgcac	tggcatctta	cttgagattt	ggatacgcctc	75810
ggccgacttg	gtctgtttca	cgcttcctta	aacaac	atg gct atg cca	ttt gag	75864
				Met Ala Met Pro	Phe Glu	
					13725	
ata gag gta	ttg tta cca gga gaa	cta tcc ccg gcg gaa	aca tct		75909	
Ile Glu Val	Leu Leu Pro Gly Glu	Leu Ser Pro Ala Glu	Thr Ser			
	13730		13735		13740	
gca tta cag	aaa tgt gag gga aaa	att att acc ttc tca	acc ctg		75954	
Ala Leu Gln	Lys Cys Glu Gly Lys	Ile Ile Thr Phe Ser	Thr Leu			
	13745		13750		13755	
cgt cat cga	gct tca ctg gtg gat	ata gcg ctg tcg tca	tat tac		75999	
Arg His Arg	Ala Ser Leu Val Asp	Ile Ala Leu Ser Ser	Tyr Tyr			
	13760		13765		13770	
att aac ggt	gct cca cca gac acg	ctc tcg ctg tta gag	gca tac		76044	
Ile Asn Gly	Ala Pro Pro Asp Thr	Leu Ser Leu Leu Glu	Ala Tyr			
	13775		13780		13785	
cga atg cga	ttc gcg gca gtt ata	aca cgg gtc atc ccg	gga aag		76089	
Arg Met Arg	Phe Ala Ala Val Ile	Thr Arg Val Ile Pro	Gly Lys			
	13790		13795		13800	
ttg ttg gcg	cat gcc att ggc gtg	ggg act cct aca ccc	ggg ttg		76134	
Leu Leu Ala	His Ala Ile Gly Val	Gly Thr Pro Thr Pro	Gly Leu			
	13805		13810		13815	

ttt att caa Phe Ile Gln 13820	aat aca tcc ccc gtt Asn Thr Ser Pro Val 13825	gat ctt tgt aat ggc Asp Leu Cys Asn Gly 13830	gat tac Asp Tyr	76179
atc tgc tta Ile Cys Leu 13835	ctt cct ccg gtt ttc Leu Pro Pro Val Phe 13840	ggg tcc gca gac tca Gly Ser Ala Asp Ser 13845	att cgc Ile Arg	76224
ttg gac tct Leu Asp Ser 13850	gta gga ctg gaa att Val Gly Leu Glu Ile 13855	gtt ttc cct tta acc Val Phe Pro Leu Thr 13860	atc ccc Ile Pro	76269
cag acc tta Gln Thr Leu 13865	atg cga gaa atc atc Met Arg Glu Ile Ile 13870	gcc aaa gtg gtt gca Ala Lys Val Val Ala 13875	cgg gcc Arg Ala	76314
gtt gag cgc Val Glu Arg 13880	acg gcc gcg ggt gct Thr Ala Ala Gly Ala 13885	caa att tta ccc cac Gln Ile Leu Pro His 13890	gaa gtt Glu Val	76359
cta cga ggc Leu Arg Gly 13895	gcg gat gtc att tgt Ala Asp Val Ile Cys 13900	tac aat gga agg cgt Tyr Asn Gly Arg Arg 13905	tat gaa Tyr Glu	76404
ctc gaa aca Leu Glu Thr 13910	aat tta caa cat cgg Asn Leu Gln His Arg 13915	gac gga tcg gat gcg Asp Gly Ser Asp Ala 13920	gct att Ala Ile	76449
cgc aca ttg Arg Thr Leu 13925	gtt tta aat cta atg Val Leu Asn Leu Met 13930	ttt tcc ata aac gag Phe Ser Ile Asn Glu 13935	gga tgt Gly Cys	76494
ctg ctt tta Leu Leu Leu 13940	ttg gcg ctg att cca Leu Ala Leu Ile Pro 13945	act ttg tta gtc caa Thr Leu Leu Val Gln 13950	gga gca Gly Ala	76539
cac gac ggt His Asp Gly 13955	tat gta aat tta ttg Tyr Val Asn Leu Leu 13960	ata caa acg gcc aat Ile Gln Thr Ala Asn 13965	tgc gtt Cys Val	76584
aga gaa acc Arg Glu Thr 13970	ggc cag tta att aat Gly Gln Leu Ile Asn 13975	ata ccg cca atg ccg Ile Pro Pro Met Pro 13980	cgg att Arg Ile	76629
caa gac ggc Gln Asp Gly 13985	cat cgc cga ttt ccc His Arg Arg Phe Pro 13990	ata tat gaa act att Ile Tyr Glu Thr Ile 13995	tca tct Ser Ser	76674
tgg ata tca Trp Ile Ser 14000	aca tca tct aga ctg Thr Ser Ser Arg Leu 14005	ggg gat acc ttg gga Gly Asp Thr Leu Gly 14010	act cgc Thr Arg	76719
gca att tta Ala Ile Leu 14015	cgc gtc tgt gtg ttt Arg Val Cys Val Phe 14020	gat gga ccc tct act Asp Gly Pro Ser Thr 14025	gtt cat Val His	76764
ccg gga gac Pro Gly Asp 14030	cgc acg gcc gtg att Arg Thr Ala Val Ile 14035	caa gtg taa acaggtgtta Gln Val		76807

ataaaaacac aaccagtcta gttacatttc acgcgtcttg tttttattta ataggcataa	76867
acacggaatc cggatatacat gaactgccaa tatacacgga cataattaat gcaaccatca	76927
gatcatctga cattgttccc gtggtacctt taccctgtga agttttttgtg tctagattac	76987
ccataccgcc ttttaattacc tctgtcaggt tatccaactg tttacataga tactccacgg	77047
ggtctacacc taactttact gttagggata caagctcctg tgaggctatt atattttccgg	77107
agttaaactcg ttttaacaaaa tagtctacgg ccggcggtttt ttgtttttgt aataaaaaaa	77167
aagggtacgc cacgctacat ccgggaggta tggaatgata aaacagtaac actggagcgg	77227
aagatagcac gtttcccttt tgcaggacag caaactgttg tgctatagcc aacgatattg	77287
caactgcaga atcctggctg ctgtttccct ctatagaaac gtgtacgttt gtaaattgtat	77347
tggggtgtaa agcgagtatg tggcctaagc attgagtaac gcaacgccct atctcactgg	77407
aagacgtgcc agttaaagct ctaagaaaaa agtgctccaa tccaaatata atccaatccg	77467
acttataacg accaacaatc gctacaccag taccagacgc tcgtgtattt gaggtaaatg	77527
cagggtctac gtaaactgtac aacactgacg ataatatagc acaattcgca acggttgacg	77587
gccgatataa aataaacctc tcacgggcag tttttgtaaa taatggccgg tcaaacccca	77647
cacccccaga attctgttta cgcccaccta caatttcctg cacgaaggag tcggccataa	77707
ataaatctgc agtgcgccgc atgggtccat ccattgtgat gaaaaccggc ttattttaata	77767
cataacacga acaagctgtg acatcgctat gtgctaaaac acgcggcatg tgatcgtcgc	77827
atacatatgt aacaacgttt aacaactgat ccgacgatcc acgtaagtta taaaaaaac	77887
ttgtacttgc ttttccggta tttgttgatg aaacaaaaat aatttttaca ttgggtttgat	77947
ttaaaaatcc gactatagtt tgtacagcat caggctgaat aaaattagct tcatccacaa	78007
acagaagatt aaaatcttga cctcggatac cctggaacga tagaaagata tatagttacc	78067
ccaccaaagt ttaaattgtat ccttaaatac cacgtacgta aaaaatgttt gaatacgtac	78127
atattttcttt tttttttcca gtacaacat atccggtgta ta atg gaa gcc cat	78181
	Met Glu Ala His
	14040
ttg gca aat gaa acc aaa cat gca ctt tgg cat aat gat cac aca	78226
Leu Ala Asn Glu Thr Lys His Ala Leu Trp His Asn Asp His Thr	
	14045 14050 14055
aaa gga tta cta cac gtt gtg ata cct aac gcg ggg ctt att gcg	78271
Lys Gly Leu Leu His Val Val Ile Pro Asn Ala Gly Leu Ile Ala	
	14060 14065 14070
gcc gga ata gat ccc gca tta ctg att tta aag aaa ccc gga caa	78316
Ala Gly Ile Asp Pro Ala Leu Leu Ile Leu Lys Lys Pro Gly Gln	
	14075 14080 14085

cgc ttc aag gtt	gaa gta caa aca aga	tat cat gct aca ggt	caa	78361
Arg Phe Lys Val	Glu Val Gln Thr Arg	Tyr His Ala Thr Gly	Gln	
14090	14095	14100		
tgc gaa ccg tgg	tgt caa gtt ttc gcc	gcg tac att ccc gat	aac	78406
Cys Glu Pro Trp	Cys Gln Val Phe Ala	Ala Tyr Ile Pro Asp	Asn	
14105	14110	14115		
gcc tta aca aat	ctc tta ata cca aaa	acg gaa cca ttt gtt	tca	78451
Ala Leu Thr Asn	Leu Leu Ile Pro Lys	Thr Glu Pro Phe Val	Ser	
14120	14125	14130		
cac gtt ttt tcg	gcc acg cat aat tca	ggg gga ttg att tta	tca	78496
His Val Phe Ser	Ala Thr His Asn Ser	Gly Gly Leu Ile Leu	Ser	
14135	14140	14145		
ttg cct gtt tat	ctt agc ccc ggt tta	ttc ttt gat gca ttt	aac	78541
Leu Pro Val Tyr	Leu Ser Pro Gly Leu	Phe Phe Asp Ala Phe	Asn	
14150	14155	14160		
gtt gta gcg ata	cga ata aat act gga	aac cgc aag cac cgt	gat	78586
Val Val Ala Ile	Arg Ile Asn Thr Gly	Asn Arg Lys His Arg	Asp	
14165	14170	14175		
att tgt att atg	tat gca gaa cta atc	cca aac gga acg cgt	tat	78631
Ile Cys Ile Met	Tyr Ala Glu Leu Ile	Pro Asn Gly Thr Arg	Tyr	
14180	14185	14190		
ttt gct gat gga	caa cgg gta ctt tta	tta tgc aaa cag ctg	att	78676
Phe Ala Asp Gly	Gln Arg Val Leu Leu	Leu Cys Lys Gln Leu	Ile	
14195	14200	14205		
gcg tat atc cga	tgc acc cct cgt ctt	gca tcg tct ata aaa	ata	78721
Ala Tyr Ile Arg	Cys Thr Pro Arg Leu	Ala Ser Ser Ile Lys	Ile	
14210	14215	14220		
tac gca gag cat	atg gtg gca gcc atg	ggg gaa tca cac acg	tca	78766
Tyr Ala Glu His	Met Val Ala Ala Met	Gly Glu Ser His Thr	Ser	
14225	14230	14235		
aat ggg gac aat	att gga ccc gtt tca	tcc ata atc gat ctt	gat	78811
Asn Gly Asp Asn	Ile Gly Pro Val Ser	Ser Ile Ile Asp Leu	Asp	
14240	14245	14250		
cga cag tta act	tct gga ggt att gat	gac tcc cct gct gaa	aca	78856
Arg Gln Leu Thr	Ser Gly Gly Ile Asp	Asp Ser Pro Ala Glu	Thr	
14255	14260	14265		
cgc ata cag gaa	aat aat cgg gac gtc	ctt gag cta ata aaa	cgg	78901
Arg Ile Gln Glu	Asn Asn Arg Asp Val	Leu Glu Leu Ile Lys	Arg	
14270	14275	14280		
gcc gta aac att	gtt aac tcc agg cac	ccc gtc cga cct tct	agt	78946
Ala Val Asn Ile	Val Asn Ser Arg His	Pro Val Arg Pro Ser	Ser	
14285	14290	14295		
tcc cgc gtt gca	tct ggg ttg ctt caa	agt gca aag ggc cac	gga	78991
Ser Arg Val Ala	Ser Gly Leu Leu Gln	Ser Ala Lys Gly His	Gly	
14300	14305	14310		

gcg caa act tcc Ala Gln Thr Ser 14315	aac aca gat ccg atc Asn Thr Asp Pro Ile 14320	aat aac ggt tcc ttt Asn Asn Gly Ser Phe 14325	gat Asp	79036
ggc gtc ctt gag Gly Val Leu Glu 14330	ccg cct gga caa ggg Pro Pro Gly Gln Gly 14335	cga ttt acg gga aag Arg Phe Thr Gly Lys 14340	aaa Lys	79081
aac aat tcg tcc Asn Asn Ser Ser 14345	gcc agc atc cca cct Ala Ser Ile Pro Pro 14350	tta caa gac gtt cta Leu Gln Asp Val Leu 14355	ttg Leu	79126
ttt acc cca gct Phe Thr Pro Ala 14360	tcg aca gaa ccc caa Ser Thr Glu Pro Gln 14365	agt ctt atg gaa tgg Ser Leu Met Glu Trp 14370	ttc Phe	79171
gac atc tgt tat Asp Ile Cys Tyr 14375	gcc caa tta gtt agc Ala Gln Leu Val Ser 14380	ggg gac act cca gca Gly Asp Thr Pro Ala 14385	gat Asp	79216
ttc tgg aaa cgg Phe Trp Lys Arg 14390	cgt ccc cta tca att Arg Pro Leu Ser Ile 14395	gta ccg cga cat tac Val Pro Arg His Tyr 14400	gca Ala	79261
gaa tcc ccc agt Glu Ser Pro Ser 14405	ccg ttg att gta gta Pro Leu Ile Val Val 14410	tct tac aac gga tcc Ser Tyr Asn Gly Ser 14415	tct Ser	79306
gcc tgg gga gga Ala Trp Gly Gly 14420	cgt att acc gga agt Arg Ile Thr Gly Ser 14425	cca att tta tat cac Pro Ile Leu Tyr His 14430	tct Ser	79351
gca cag gct att Ala Gln Ala Ile 14435	att gat gct gcg tgt Ile Asp Ala Ala Cys 14440	ata aat gcc cgg gtt Ile Asn Ala Arg Val 14445	gac Asp	79396
aat ccc caa agc Asn Pro Gln Ser 14450	cta cat gtg aca gct Leu His Val Thr Ala 14455	cgc caa gag cta gtc Arg Gln Glu Leu Val 14460	gcg Ala	79441
cgt tta ccg ttt Arg Leu Pro Phe 14465	ttg gct aac gtc cta Leu Ala Asn Val Leu 14470	aat aat caa acc ccc Asn Asn Gln Thr Pro 14475	tta Leu	79486
ccc gcc ttt aaa Pro Ala Phe Lys 14480	cca ggc gcc gaa atg Pro Gly Ala Glu Met 14485	ttt tta aac cag gta Phe Leu Asn Gln Val 14490	ttt Phe	79531
aaa caa gcg tgt Lys Gln Ala Cys 14495	gtg aca tcg cta acc Val Thr Ser Leu Thr 14500	caa ggt ctt ata acg Gln Gly Leu Ile Thr 14505	gag Glu	79576
tta caa acg aac Leu Gln Thr Asn 14510	ccg act cta caa caa Pro Thr Leu Gln Gln 14515	ctc atg gaa tat gat Leu Met Glu Tyr Asp 14520	att Ile	79621
gca gat tct tcc Ala Asp Ser Ser 14525	caa acg gtt att gat Gln Thr Val Ile Asp 14530	gaa att gta gcc cgc Glu Ile Val Ala Arg 14535	aca Thr	79666

cca gac ctg att	cag act ata gtt tcg	gtg tta acg gaa atg	tca	79711
Pro Asp Leu Ile	Gln Thr Ile Val Ser	Val Leu Thr Glu Met	Ser	
14540	14545	14550		
atg gat gcg ttt	tat aac agc tcc ttg	atg tat gcg gtt ttg	gcg	79756
Met Asp Ala Phe	Tyr Asn Ser Ser Leu	Met Tyr Ala Val Leu	Ala	
14555	14560	14565		
tat ctg tca tct	gta tat aca cga cca	caa ggt ggg ggg tat	ata	79801
Tyr Leu Ser Ser	Val Tyr Thr Arg Pro	Gln Gly Gly Gly Tyr	Ile	
14570	14575	14580		
ccc tac ctt cac	gct tcc ttc cca tgc	tgg tta ggt aat cgt	tct	79846
Pro Tyr Leu His	Ala Ser Phe Pro Cys	Trp Leu Gly Asn Arg	Ser	
14585	14590	14595		
ata tat tta ttt	gac tat tat aat tca	gga ggg gaa ata ctt	aag	79891
Ile Tyr Leu Phe	Asp Tyr Tyr Asn Ser	Gly Gly Glu Ile Leu	Lys	
14600	14605	14610		
ctt tcc aag gtc	ccc gtt ccc gta gcc	tta gaa aag gtt ggt	att	79936
Leu Ser Lys Val	Pro Val Pro Val Ala	Leu Glu Lys Val Gly	Ile	
14615	14620	14625		
ggg aat tcc aca	caa ctg agg ggt aaa	ttt ata cgc agc gcg	gat	79981
Gly Asn Ser Thr	Gln Leu Arg Gly Lys	Phe Ile Arg Ser Ala	Asp	
14630	14635	14640		
att gtt gat att	gga att tgt tct aag	tat tta ccc ggt caa	tgt	80026
Ile Val Asp Ile	Gly Ile Cys Ser Lys	Tyr Leu Pro Gly Gln	Cys	
14645	14650	14655		
tac gcg tac att	tgt cta gga ttt aac	cag caa tta caa tcc	att	80071
Tyr Ala Tyr Ile	Cys Leu Gly Phe Asn	Gln Gln Leu Gln Ser	Ile	
14660	14665	14670		
tta gtt tta ccg	ggg gga ttt gcg gca	tgt ttt tgt att acc	gat	80116
Leu Val Leu Pro	Gly Gly Phe Ala Ala	Cys Phe Cys Ile Thr	Asp	
14675	14680	14685		
acc cta cag gca	gca cta cct gca tcg	tta atc gga cct att	cta	80161
Thr Leu Gln Ala	Ala Leu Pro Ala Ser	Leu Ile Gly Pro Ile	Leu	
14690	14695	14700		
gac aga ttc tgc	ttc tct att ccc aac	ccc cat aaa taa		80200
Asp Arg Phe Cys	Phe Ser Ile Pro Asn	Pro His Lys		
14705	14710			
attagtgtca ctataaaaac ataacaccag aatctcttca tatgtaattt tacgtcattt				80260
ctcccgtttc caccctct taaaatataa aataaccggg tgggtggcat taaaccaca				80320
agtacccggg cggcaatccg ctagactggt tttctgctc atg gaa tta caa cgc				80374
Met Glu Leu Gln Arg				
14715				
ata ttt ccg ctg tac acc gct	acg ggt gca gcg cgc	aaa tta acc	80419	
Ile Phe Pro Leu Tyr Thr Ala	Thr Gly Ala Ala Arg	Lys Leu Thr		
14720	14725	14730		

ccc gag Pro Glu 14735	gca gtt cag aga ctc Ala Val Gln Arg Leu 14740	tgc gat gca tta acg Cys Asp Ala Leu Thr 14745	ctg gat atg Leu Asp Met	80464
gga tta Gly Leu 14750	tgg aag tcc atc ctg Trp Lys Ser Ile Leu 14755	acc gat ccc cgg gtg Thr Asp Pro Arg Val 14760	aaa ata atg Lys Ile Met	80509
cga tca Arg Ser 14765	act gct ttt ata act Thr Ala Phe Ile Thr 14770	tta agg atc gct ccg Leu Arg Ile Ala Pro 14775	ttt atc ccc Phe Ile Pro	80554
ctt caa Leu Gln 14780	acg gat act act aat Thr Asp Thr Thr Asn 14785	att gcc gtt gtt gta Ile Ala Val Val Val 14790	gcc aca att Ala Thr Ile	80599
tac atc Tyr Ile 14795	acg cgc cca cgt cag Thr Arg Pro Arg Gln 14800	atg aac tta cct ccg Met Asn Leu Pro Pro 14805	aag act ttt Lys Thr Phe	80644
cat gta His Val 14810	att gta aat ttt aat Ile Val Asn Phe Asn 14815	tac gag gtc tcg tac Tyr Glu Val Ser Tyr 14820	gca atg acg Ala Met Thr	80689
gcg act Ala Thr 14825	tta aga att tat ccg Leu Arg Ile Tyr Pro 14830	gtt gaa aac ata gac Val Glu Asn Ile Asp 14835	cat gtt ttt His Val Phe	80734
gga gca Gly Ala 14840	acg ttt aag aac ccg Thr Phe Lys Asn Pro 14845	atc gcg tac ccc ctt Ile Ala Tyr Pro Leu 14850	cca aca tct Pro Thr Ser	80779
att ccg Ile Pro 14855	gat cct cga gca gat Asp Pro Arg Ala Asp 14860	ccc acc ccc gca gat Pro Thr Pro Ala Asp 14865	ctt aca cca Leu Thr Pro	80824
acg cca Thr Pro 14870	aac tta agc aac tac Asn Leu Ser Asn Tyr 14875	tta caa ccc ccg cgg Leu Gln Pro Pro Arg 14880	ctt ccg aaa Leu Pro Lys	80869
aat cca Asn Pro 14885	tac gca tgt aaa gtt Tyr Ala Cys Lys Val 14890	att tct ccg gga gtg Ile Ser Pro Gly Val 14895	tgg tgg tca Trp Trp Ser	80914
gac gaa Asp Glu 14900	cga agg cgt tta tat Arg Arg Arg Leu Tyr 14905	gta ctg gct atg gaa Val Leu Ala Met Glu 14910	cct aat tta Pro Asn Leu	80959
ata ggg Ile Gly 14915	cta tgt ccc gcc gga Leu Cys Pro Ala Gly 14920	tgg cat gct cgg ata Trp His Ala Arg Ile 14925	ctt ggc tct Leu Gly Ser	81004
gta tta Val Leu 14930	aat cga ctc ctc agc Asn Arg Leu Leu Ser 14935	cat gcg gac gga tgt His Ala Asp Gly Cys 14940	gat gaa tgt Asp Glu Cys	81049
aat cat Asn His 14945	aga gtt cac gtg ggg Arg Val His Val Gly 14950	gca ctg tat gcg tta Ala Leu Tyr Ala Leu 14955	ccc cat gtc Pro His Val	81094

aca aat	cat gcg gaa ggt tgt	gtg tgt tgg gct ccg	tgt atg tgg	81139		
Thr Asn	His Ala Glu Gly Cys	Val Cys Trp Ala Pro	Cys Met Trp			
14960	14965	14970				
aga aag	gcc ggt cag cgg gaa	tta aaa gtg gag gta	gac att ggc	81184		
Arg Lys	Ala Gly Gln Arg Glu	Leu Lys Val Glu Val	Asp Ile Gly			
14975	14980	14985				
gcc acg	cag gtt ctt ttt gta	gat gtc acc acc tgc	att cga att	81229		
Ala Thr	Gln Val Leu Phe Val	Asp Val Thr Thr Cys	Ile Arg Ile			
14990	14995	15000				
acg agt	act aaa aat cct cgc	att acc gca aat ctt	ggc gac gtt	81274		
Thr Ser	Thr Lys Asn Pro Arg	Ile Thr Ala Asn Leu	Gly Asp Val			
15005	15010	15015				
ata gcg	gga acc aac gcc agt	ggg ctc tct gta cca	gta aat tca	81319		
Ile Ala	Gly Thr Asn Ala Ser	Gly Leu Ser Val Pro	Val Asn Ser			
15020	15025	15030				
tct ggg	tgg cag ctt tat atg	ttt gga gaa aca tta	agc cgg gct	81364		
Ser Gly	Trp Gln Leu Tyr Met	Phe Gly Glu Thr Leu	Ser Arg Ala			
15035	15040	15045				
att att	aac ggc tgt ggt ctg	ctt cag cga att tgc	ttc ccc gag	81409		
Ile Ile	Asn Gly Cys Gly Leu	Leu Gln Arg Ile Cys	Phe Pro Glu			
15050	15055	15060				
aca caa	aga tta tcg ggt gaa	ccg gaa cct aca acc	acc tag	81451		
Thr Gln	Arg Leu Ser Gly Glu	Pro Glu Pro Thr Thr	Thr			
15065	15070	15075				
tataccttaa	ctcaaccgcc	gttgttgaaa	ggtatatgtc	aacatttaca	gtaatataatt	81511
aaagggttaa	tttataaaac	actcacgttt	gtgttggtgac	ttgacgcgaa	caccgctgtg	81571
ctgtaagacc	cgtcggtaaa	tgaaaacgta	atagattcgc	cttttacatg	atccacgtaa	81631
tttgccccaa	accactgttc	caggcgagac	ttgataccct	caaacacggg	ttccgttgct	81691
ttgcgtatat	gagccgtata	accacttta	attcctctaa	acgtggccat	tactaaagct	81751
attaatggta	caagaaacca	tgttttccca	tgtctacgtg	gtaccaaaaa	cacagttgat	81811
ttttgtttga	agtgttctaa	aacactgtca	gaaacacttg	gcgtgttaaa	cactgtacgc	81871
agaaagcagt	caactctgtc	ggcatgatcg	cccaatagca	ccgatgaaat	aaaatgcgtg	81931
gtgtgcatga	ggatcatttt	ttgaaacagt	tccaacgtcc	ccttatatct	gccatagatt	81991
ggaacgtcaa	cctttgcgcg	tttgccatga	cttccacact	cttcaatact	ctcaaaagat	82051
gtttccacaa	ggtacgaaaa	ccgttggtga	aaggtagaca	actgacagaa	actatccgac	82111
agagaaaacg	cgcgaaatgt	gttcataaca	ccgctatacg	catttcgatg	aggtgctgct	82171
tcttccgggtg	aatattcata	aaactgtaca	ctactgacag	ccttttttaa	ttcagggctt	82231
acgtttgcat	ttaccgaata	tcgccatggg	ttcaaaacta	cattgggggt	acagttgtac	82291

cctgttgacg	atagaaacgc	gccaaacatt	gcccgtcgag	cagtagccga	gaacagtgga	82351									
atatattcac	aacagttgtg	aagcgttcca	attccgggaa	taacggcctg	atgacgtcgg	82411									
gttacatcta	tagcaaaatt	cagaaacggg	atttggggtg	cgtttcccag	agacccttgc	82471									
cgcggtggaac	acggggtagg	ggactccaac	gtcccaaagc	gttcatecct	acgacgcttt	82531									
agacgttcaa	aatatcttac	agattcttca	ccaagcgtac	gaccaaacat	tatcaatgac	82591									
atttaacatc	aattcacgga	atccgcctca	tctcttgtaa	gcagtaaaac	aggaagccgc	82651									
gtcatcttac	gtactcgtta	cgatatatc	ataaacattt	tcagggccgc	attcattcac	82711									
tttggtc	atg	tca	ggc	cac	act	cca	acc	tac	gct	tct	cat	agg	cgt	82757	
	Met	Ser	Gly	His	Thr	Pro	Thr	Tyr	Ala	Ser	His	Arg	Arg		
				15080					15085						
aac	cgt	gtc	aaa	cta	gtt	gag	gcg	cat	aac	cgc	gcg	ggg	tta	ttt	82802
Asn	Arg	Val	Lys	Leu	Val	Glu	Ala	His	Asn	Arg	Ala	Gly	Leu	Phe	
15090					15095					15100					
aaa	gaa	cgg	acc	ctc	gat	cta	atc	cgt	ggg	ggt	gcg	agt	gta	caa	82847
Lys	Glu	Arg	Thr	Leu	Asp	Leu	Ile	Arg	Gly	Gly	Ala	Ser	Val	Gln	
15105					15110					15115					
gat	cca	gca	ttt	gtg	tat	gcc	ttt	act	gct	gca	aaa	gag	gcc	tgc	82892
Asp	Pro	Ala	Phe	Val	Tyr	Ala	Phe	Thr	Ala	Ala	Lys	Glu	Ala	Cys	
15120					15125					15130					
gcc	gat	tta	aat	aac	cag	ctc	cgc	tct	gca	gct	cgc	ata	gct	tca	82937
Ala	Asp	Leu	Asn	Asn	Gln	Leu	Arg	Ser	Ala	Ala	Arg	Ile	Ala	Ser	
15135					15140					15145					
gtt	gaa	cag	aag	att	cgt	gat	ata	caa	tcc	aag	gtt	gag	gaa	caa	82982
Val	Glu	Gln	Lys	Ile	Arg	Asp	Ile	Gln	Ser	Lys	Val	Glu	Glu	Gln	
15150					15155					15160					
aca	agt	att	caa	cag	att	tta	aat	aca	aac	aga	cgc	tat	ata	gca	83027
Thr	Ser	Ile	Gln	Gln	Ile	Leu	Asn	Thr	Asn	Arg	Arg	Tyr	Ile	Ala	
15165					15170					15175					
ccc	gat	ttt	att	cgc	ggt	ttg	gat	aaa	aca	gaa	gac	gat	aat	acc	83072
Pro	Asp	Phe	Ile	Arg	Gly	Leu	Asp	Lys	Thr	Glu	Asp	Asp	Asn	Thr	
15180					15185					15190					
gat	aat	ata	gac	aga	ctg	gaa	gac	gcg	gta	gga	ccg	aac	atc	gaa	83117
Asp	Asn	Ile	Asp	Arg	Leu	Glu	Asp	Ala	Val	Gly	Pro	Asn	Ile	Glu	
15195					15200					15205					
cac	gaa	aat	cat	act	tgg	ttt	gga	gaa	gac	gac	gaa	gcg	tta	ctt	83162
His	Glu	Asn	His	Thr	Trp	Phe	Gly	Glu	Asp	Asp	Glu	Ala	Leu	Leu	
15210					15215					15220					
aca	caa	tgg	atg	ctg	acg	aca	cac	ccc	cca	acc	tcc	aaa	tat	ctc	83207
Thr	Gln	Trp	Met	Leu	Thr	Thr	His	Pro	Pro	Thr	Ser	Lys	Tyr	Leu	
15225					15230					15235					
caa	ctg	cag	gac	ctt	tgc	gtt	ccc	acc	aca	ata	ccg	acg	gac	atg	83252
Gln	Leu	Gln	Asp	Leu	Cys	Val	Pro	Thr	Thr	Ile	Pro	Thr	Asp	Met	

15240	15245	15250	
aac caa atg caa ccg cag	ccg atc agc aag aac	gag aat cca cca	83297
Asn Gln Met Gln Pro Gln	Pro Ile Ser Lys Asn	Glu Asn Pro Pro	
15255	15260	15265	
acc cca cac acg gat gtg	taa atcatccatg ggccaatccg	tcaactgcaa	83348
Thr Pro His Thr Asp Val			
15270	15275		
catgcatgga atcaccagaa	cgatcacaac agacaagctt	atTTTTtatta aagcacggct	83408
taacgagaga tccaatacat	caacgcgaaa ggggtggacgt	TTTTccacaa tTTaacaac	83468
ccccatgggt TTTtagaatt	tccaaattat cccgtTTaat	Tgtacccatc tTcacgctca	83528
atgaacagtt atgtTTTTct	aaattacaga tTcgagatag	acccaggttt gcgggacggg	83588
gaacgtatgg gcgtgttcat	atatacccat cgtcaaaaat	agctgtaaaa accatggaca	83648
gtcgtgtttt taatagagag	ttaattaacg cgattTTtagc	gagtgagggt tctatacgag	83708
caggggaaag gctaggtatt	tctagcatag tttgcTTTT	aggTTTTtctg ttacaaacca	83768
aacagctact gTTTccggca	tacgacatgg atatggatga	atacattgtt cgcctgtcca	83828
gacggttgac aatacctgat	cacatagaca gaaaaattgc	ccatgtatTT ttagatttgg	83888
ctcaagcgtt gacgtTTTTa	aatcgaacgt gcggcctgac	ccacctagat gtgaaatgtg	83948
gcaatatTTT tcttaacgTc	gacaactTTg cctcgttTga	aataaccaca gcagtaatcg	84008
gagactatag cctagtaaca	ttaaatacgt attccctTTg	tactcgagcg atatttgaag	84068
ttggaaatcc atcccacccg	gagcacgtac tacgcgtacc	ccgggatgca tcgcagatgt	84128
catttcgTTT ggtgttgagt	catggaacaa accaaccCCC	tgaaatctTg cttgattata	84188
ttaatggaac gggccttact	aatatactg gaacctTgcc	ccaaagagtt ggacttgcca	84248
ttgatctTTa tgcattgggc	caagcactct tagaagttat	cctgctagga cgtcttcccg	84308
gacaactgcc catttcagta	catcggaccc cgcattatca	ctactacggT cataagttat	84368
caccagattt ggcgcttgat	acgctggcat atcgatgtgt	cctggcgcca tatatactcc	84428
catctgacat ccccggggac	ttaaattata atccctTTat	acacgccgga gagctgaaca	84488
cccgtatTTc ccggaattct	ttacgccgga tattccagtg	tcacgcagtg cgttacggcg	84548
taacgcactc aaagctTTTc	gaaggcatac gcattccggc	ctcattatac ccagccactg	84608
ttgttacatc gttgttgtgt	cacgataatt cagaaatacg	ctcggatcac cctttatt	84666
atg gca cga tcg gga	ttg gat agg atc gac	ata agc ccc cag cca	84711
Met Ala Arg Ser Gly	Leu Asp Arg Ile Asp	Ile Ser Pro Gln Pro	
15280	15285	15290	
gcc aaa aaa att gcc	cgt gtg gga ggt cta	cag cac cct ttt gta	84756
Ala Lys Lys Ile Ala	Arg Val Gly Gly Leu	Gln His Pro Phe Val	

15295					15300					15305					
aaa	acg	gat	att	aac	acg	att	aac	gtt	gaa	cac	cat	ttt	ata	gac	84801
Lys	Thr	Asp	Ile	Asn	Thr	Ile	Asn	Val	Glu	His	His	Phe	Ile	Asp	
				15310					15315					15320	
acg	cta	cag	aag	aca	tca	ccg	aac	atg	gac	tgt	cgc	ggg	atg	aca	84846
Thr	Leu	Gln	Lys	Thr	Ser	Pro	Asn	Met	Asp	Cys	Arg	Gly	Met	Thr	
				15325					15330					15335	
gcg	ggt	att	ttt	att	cgt	tta	tcc	cac	atg	tat	aaa	att	cta	aca	84891
Ala	Gly	Ile	Phe	Ile	Arg	Leu	Ser	His	Met	Tyr	Lys	Ile	Leu	Thr	
				15340					15345					15350	
act	ctg	gag	tct	cca	aat	gat	gta	acc	tac	aca	aca	ccc	ggt	tct	84936
Thr	Leu	Glu	Ser	Pro	Asn	Asp	Val	Thr	Tyr	Thr	Thr	Pro	Gly	Ser	
				15355					15360					15365	
acc	aac	gca	ctg	ttc	ttt	aag	acg	tcc	aca	cag	cct	cag	gag	ccg	84981
Thr	Asn	Ala	Leu	Phe	Phe	Lys	Thr	Ser	Thr	Gln	Pro	Gln	Glu	Pro	
				15370					15375					15380	
cgt	ccg	gaa	gag	tta	gca	tcc	aaa	tta	acc	caa	gac	gac	att	aaa	85026
Arg	Pro	Glu	Glu	Leu	Ala	Ser	Lys	Leu	Thr	Gln	Asp	Asp	Ile	Lys	
				15385					15390					15395	
cgt	att	cta	tta	aca	ata	gaa	tcg	gag	act	cgt	ggt	cag	ggc	gac	85071
Arg	Ile	Leu	Leu	Thr	Ile	Glu	Ser	Glu	Thr	Arg	Gly	Gln	Gly	Asp	
				15400					15405					15410	
aat	gcc	att	tgg	aca	cta	ctc	aga	cga	aat	tta	atc	acc	gca	tca	85116
Asn	Ala	Ile	Trp	Thr	Leu	Leu	Arg	Arg	Asn	Leu	Ile	Thr	Ala	Ser	
				15415					15420					15425	
act	ctt	aaa	tgg	agt	gta	tct	gga	ccc	gtc	att	cca	cct	cag	tgg	85161
Thr	Leu	Lys	Trp	Ser	Val	Ser	Gly	Pro	Val	Ile	Pro	Pro	Gln	Trp	
				15430					15435					15440	
ttt	tac	cac	cat	aac	act	aca	gac	aca	tac	ggt	gat	gcg	gcg	gca	85206
Phe	Tyr	His	His	Asn	Thr	Thr	Asp	Thr	Tyr	Gly	Asp	Ala	Ala	Ala	
				15445					15450					15455	
atg	gcg	ttt	gga	aaa	acc	aac	gaa	ccg	gcg	gca	cga	gcg	ata	gtt	85251
Met	Ala	Phe	Gly	Lys	Thr	Asn	Glu	Pro	Ala	Ala	Arg	Ala	Ile	Val	
				15460					15465					15470	
gaa	gca	ttg	ttt	ata	gat	ccg	gct	gat	atc	cgt	act	cct	gat	cat	85296
Glu	Ala	Leu	Phe	Ile	Asp	Pro	Ala	Asp	Ile	Arg	Thr	Pro	Asp	His	
				15475					15480					15485	
tta	acg	cca	gaa	gct	aca	act	aag	ttt	ttt	aat	ttt	gac	atg	ctc	85341
Leu	Thr	Pro	Glu	Ala	Thr	Thr	Lys	Phe	Phe	Asn	Phe	Asp	Met	Leu	
				15490					15495					15500	
aat	acc	aaa	tct	cca	agt	ctc	ctt	gtg	ggt	aca	cca	aga	atc	gga	85386
Asn	Thr	Lys	Ser	Pro	Ser	Leu	Leu	Val	Gly	Thr	Pro	Arg	Ile	Gly	
				15505					15510					15515	
acg	tat	gaa	tgt	gga	ctt	tta	atc	gac	gtt	cga	acg	gga	ctt	ata	85431
Thr	Tyr	Glu	Cys	Gly	Leu	Leu	Ile	Asp	Val	Arg	Thr	Gly	Leu	Ile	

15520					15525					15530					
ggc	gcg	tcg	ttg	gac	ggt	ctt	gta	tgt	gac	agg	gac	cct	tta	act	85476
Gly	Ala	Ser	Leu	Asp	Val	Leu	Val	Cys	Asp	Arg	Asp	Pro	Leu	Thr	
				15535					15540					15545	
ggc	acc	cta	aat	ccc	cac	cct	gca	gaa	acc	gac	att	tca	ttt	ttt	85521
Gly	Thr	Leu	Asn	Pro	His	Pro	Ala	Glu	Thr	Asp	Ile	Ser	Phe	Phe	
				15550					15555					15560	
gaa	att	aaa	tgt	cgt	gct	aaa	tac	ctc	ttt	gat	cca	gat	gac	aaa	85566
Glu	Ile	Lys	Cys	Arg	Ala	Lys	Tyr	Leu	Phe	Asp	Pro	Asp	Asp	Lys	
				15565					15570					15575	
aat	aac	ccg	ctc	ggt	cgg	acg	tac	acc	acg	tta	ata	aat	aga	cct	85611
Asn	Asn	Pro	Leu	Gly	Arg	Thr	Tyr	Thr	Thr	Leu	Ile	Asn	Arg	Pro	
				15580					15585					15590	
aca	atg	gca	aat	cta	cgg	gac	ttt	tta	tat	act	ata	aaa	aac	cca	85656
Thr	Met	Ala	Asn	Leu	Arg	Asp	Phe	Leu	Tyr	Thr	Ile	Lys	Asn	Pro	
				15595					15600					15605	
tgt	gta	agc	ttc	ttt	gga	ccc	tca	gca	aac	cca	agt	aca	cgc	gag	85701
Cys	Val	Ser	Phe	Phe	Gly	Pro	Ser	Ala	Asn	Pro	Ser	Thr	Arg	Glu	
				15610					15615					15620	
gcc	tta	ata	acg	gat	cac	ggt	gaa	tgg	aaa	cgt	tta	gga	ttt	aaa	85746
Ala	Leu	Ile	Thr	Asp	His	Val	Glu	Trp	Lys	Arg	Leu	Gly	Phe	Lys	
				15625					15630					15635	
ggt	ggg	agg	gcc	ctt	aca	gaa	ctc	gac	gcc	cat	cat	ttg	ggc	ctc	85791
Gly	Gly	Arg	Ala	Leu	Thr	Glu	Leu	Asp	Ala	His	His	Leu	Gly	Leu	
				15640					15645					15650	
aat	cgg	aca	atc	tca	tcc	cga	gtg	tgg	gta	ttt	aat	gat	ccg	gac	85836
Asn	Arg	Thr	Ile	Ser	Ser	Arg	Val	Trp	Val	Phe	Asn	Asp	Pro	Asp	
				15655					15660					15665	
ata	caa	aag	ggg	aca	att	aca	acc	att	gca	tgg	gcc	act	gga	gat	85881
Ile	Gln	Lys	Gly	Thr	Ile	Thr	Thr	Ile	Ala	Trp	Ala	Thr	Gly	Asp	
				15670					15675					15680	
acg	gct	ctt	caa	att	cct	gta	ttt	gcc	aat	ccg	cgg	cac	gct	aac	85926
Thr	Ala	Leu	Gln	Ile	Pro	Val	Phe	Ala	Asn	Pro	Arg	His	Ala	Asn	
				15685					15690					15695	
ttt	aaa	caa	att	gcc	gta	caa	acc	tat	gta	tta	tcc	ggt	tac	ttt	85971
Phe	Lys	Gln	Ile	Ala	Val	Gln	Thr	Tyr	Val	Leu	Ser	Gly	Tyr	Phe	
				15700					15705					15710	
cca	gcg	cta	aaa	cta	cgg	ccc	ttc	ctt	gtc	acc	ttt	ata	gga	cgt	86016
Pro	Ala	Leu	Lys	Leu	Arg	Pro	Phe	Leu	Val	Thr	Phe	Ile	Gly	Arg	
				15715					15720					15725	
gtg	cgc	cga	cca	cac	gag	gtg	gga	gtc	cca	ttg	cgc	gtc	gat	aca	86061
Val	Arg	Arg	Pro	His	Glu	Val	Gly	Val	Pro	Leu	Arg	Val	Asp	Thr	
				15730					15735					15740	
caa	gcg	gct	gcc	att	tac	gaa	tat	aac	tgg	ccg	act	atc	cca	ccc	86106
Gln	Ala	Ala	Ala	Ile	Tyr	Glu	Tyr	Asn	Trp	Pro	Thr	Ile	Pro	Pro	

15745	15750	15755				
cac tgt gcg gtt ccg His Cys Ala Val Pro 15760	gtt ata gcc gtt cta Val Ile Ala Val Leu 15765	acg cct atc gaa gtt Thr Pro Ile Glu Val 15770	86151			
gat gtg cct aga gtg Asp Val Pro Arg Val 15775	aca caa ata ctt aaa Thr Gln Ile Leu Lys 15780	gac aca gga aac aac Asp Thr Gly Asn Asn 15785	86196			
gcg att aca tca gca Ala Ile Thr Ser Ala 15790	ttg cgg tca ttg cga Leu Arg Ser Leu Arg 15795	tgg gac aat ctt cat Trp Asp Asn Leu His 15800	86241			
cca gcg gtc gag gag Pro Ala Val Glu Glu 15805	gaa tct gtg gat tgt Glu Ser Val Asp Cys 15810	gca aac ggt aca acg Ala Asn Gly Thr Thr 15815	86286			
agc ttg tta cgt gca Ser Leu Leu Arg Ala 15820	acg gag aaa ccg ttg Thr Glu Lys Pro Leu 15825	ctt tga actcagagtt Leu	86332			
ctttgaagac	tttgactttg	atgagaatgt	aacagaggac	gccgataaat	ccacacaacg	86392
ccgcccacga	gtgatcgatg	taacaccaaa	acgaaaacct	tcgggaaaga	gctcccattc	86452
caaatgcgca	aaatgttaaa	ccctgataaa	ccctgataaa	cgttctaata	aaaacatcaa	86512
atcatggttg	gttactgtga	atgtttgttt	tattgcttgg	gggtttacaa	gtacaaccca	86572
cgctactccc	accactgtt	tgatcgctcg	tataacagct	catcctcgcg	gtccgtttca	86632
tatgttgagt	cattttcata	gacgtagccg	tagccttgtg	atgggtaatt	tgtgcggcga	86692
gaatttctat	gtgcaggttt	tacttttcgt	atgtatcccc	gtacccgctc	gggtactctt	86752
cttacggcac	cgtagaaccg	actgcgtttc	tgtcgatgat	acacatatgc	acgcatcaat	86812
ctgagaagca	acatgacaac	ggaaaacacg	gccaggcaag	ccaaggttcc	ccgagttgtg	86872
ggaattaacc	gtggagattg	aaccgatata	gggtcatata	atcgggtccat	atacgagtgc	86932
gcggcggttc	ccaacgtagc	acaggccacg	agcgttccca	gggacgggtcc	tattaacacg	86992
tgtatataat	gcgccaaaat	taattctgat	actataagat	atacaactga	caatgtacta	87052
aatgtagaca	tggccacgga	caccgatgac	cacagtcccg	tatgtagatg	attcgccacc	87112
acaagttcca	gcattaatga	tacaaatagg	atacatatcg	ccatcaacgc	agccatcaaa	87172
ttcacgaaca	ctgcgcgcgt	aggccccgca	aggcgatata	aaaagacgct	ctgctgtcgt	87232
aaatttgca	ccgcttttat	gttcgtttcg	tccaattttc	cgcggtccaca	aaaatacgtt	87292
gtaaatatta	cacttgtcgc	aaaatgtcca	agatataatg	tagcagccac	gccgatttgc	87352
ttgtaagcta	ataataacac	aacggcgttt	aataaccaca	atgacaaaag	accccaaaaa	87412
agtgttggtg	gatctacaac	taaccatgca	acaccggagc	tttgccggac	acgttgattt	87472

ttcgtttctc ggtgtataat cgcggccgtg atcagtgtat ataccgccat ggccattgcc 87532
 gttaaagccg tgtagtaagt aaatgccaca acgctatgtg gttccaaaaa caaaaccggg 87592
 gcgctgtatc cacctctatt tccggaccat acccccccat ctaggggtggc gttaaataac 87652
 tcataatcaa ctacggcagc ataaaaacaa gggatcccgg tatattcaga agaggcggca 87712
 attaacgtag ccaggagcat taccgcaccc aaagtgaaca tcatcacctg aattatccaa 87772
 attcgccaat taagcgtatc catttgatga tctaacgctt ccacctcggg tgtcgtggtg 87832
 tcgtacggcg agactttttc agaacgcggc cccttctttt gagttccc atg tct ccc 87889
 Met Ser Pro

aac acc ggg gag agc aac gcc gcc gtc tat gcg tcc agt aca cag 87934
 Asn Thr Gly Glu Ser Asn Ala Ala Val Tyr Ala Ser Ser Thr Gln
 15830 15835 15840

ctc gcg cgg gcg tta tat gga ggg gat ctg gtt tcg tgg att aaa 87979
 Leu Ala Arg Ala Leu Tyr Gly Gly Asp Leu Val Ser Trp Ile Lys
 15845 15850 15855

cac acc cac ccg gga att agc ctg gaa ctg caa ttg gat gtt cca 88024
 His Thr His Pro Gly Ile Ser Leu Glu Leu Gln Leu Asp Val Pro
 15860 15865 15870

gta aaa cta ata aaa cct ggt atg tca caa act cgc ccg gta acc 88069
 Val Lys Leu Ile Lys Pro Gly Met Ser Gln Thr Arg Pro Val Thr
 15875 15880 15885

gtc gta cgt gcc cct atg ggc tct ggt aaa aca aca gcc ttg ctt 88114
 Val Val Arg Ala Pro Met Gly Ser Gly Lys Thr Thr Ala Leu Leu
 15890 15895 15900

gag tgg ctt caa cac gcg tta aag gca gat att agc gta ctg gtt 88159
 Glu Trp Leu Gln His Ala Leu Lys Ala Asp Ile Ser Val Leu Val
 15905 15910 15915

gtc tca tgt cgc cgt agc ttt acc cag acg ttg att caa cgg ttt 88204
 Val Ser Cys Arg Arg Ser Phe Thr Gln Thr Leu Ile Gln Arg Phe
 15920 15925 15930

aac gat gca ggc ctc tcc gga ttc gta aca tat ttg aca tcc gag 88249
 Asn Asp Ala Gly Leu Ser Gly Phe Val Thr Tyr Leu Thr Ser Glu
 15935 15940 15945

aca tat att atg ggt ttt aaa cgt ttg att gtg caa ctt gaa agc 88294
 Thr Tyr Ile Met Gly Phe Lys Arg Leu Ile Val Gln Leu Glu Ser
 15950 15955 15960

cta cac cgc gta tcc agc gaa gct atc gac agc tac gac gta tta 88339
 Leu His Arg Val Ser Ser Glu Ala Ile Asp Ser Tyr Asp Val Leu
 15965 15970 15975

ata ctg gat gag gta atg tca gtg att gga caa tta tac tcc ccc 88384
 Ile Leu Asp Glu Val Met Ser Val Ile Gly Gln Leu Tyr Ser Pro
 15980 15985 15990

aca Thr 15995	atg Met	aga Arg	cgt Arg	ctt Leu	tcc Ser 16000	gcg Ala	ggt Val	gat Asp	agc Ser	cta Leu 16005	tta Leu	tat Tyr	cgt Arg	ctt Leu	88429
tta Leu 16010	aat Asn	cgc Arg	tgt Cys	tct Ser	caa Gln 16015	att Ile	atc Ile	gcg Ala	atg Met	gat Asp 16020	gct Ala	aca Thr	gta Val	aac Asn	88474
tcg Ser 16025	cag Gln	ttt Phe	att Ile	gat Asp	tta Leu 16030	atc Ile	tcc Ser	gga Gly	ttg Leu	cgt Arg 16035	gga Gly	gat Asp	gaa Glu	aac Asn	88519
ata Ile 16040	cac His	aca Thr	att Ile	gtg Val	tgt Cys 16045	aca Thr	tac Tyr	gcg Ala	gga Gly	gtt Val 16050	ggg Gly	ttc Phe	tcc Ser	gga Gly	88564
aga Arg 16055	act Thr	tgc Cys	acg Thr	atc Ile	ctg Leu 16060	cgt Arg	gat Asp	atg Met	ggc Gly	atc Ile 16065	gac Asp	acg Thr	ctt Leu	gtg Val	88609
cga Arg 16070	gtc Val	att Ile	aaa Lys	cga Arg	tct Ser 16075	cct Pro	gaa Glu	cac His	gag Glu	gat Asp 16080	gta Val	cgt Arg	acc Thr	ata Ile	88654
cac His 16085	caa Gln	cta Leu	cgt Arg	gga Gly	aca Thr 16090	ttt Phe	ttt Phe	gac Asp	gaa Glu	cta Leu 16095	gca Ala	cta Leu	cga Arg	tta Leu	88699
caa Gln 16100	tgt Cys	ggg Gly	cat His	aac Asn	atc Ile 16105	tgt Cys	ata Ile	ttt Phe	tca Ser	tca Ser 16110	act Thr	tta Leu	tcg Ser	ttt Phe	88744
tcg Ser 16115	gag Glu	cta Leu	gtt Val	gct Ala	cag Gln 16120	ttt Phe	tgt Cys	gca Ala	ata Ile	ttt Phe 16125	aca Thr	gac Asp	tct Ser	att Ile	88789
ctt Leu 16130	att Ile	tta Leu	aac Asn	tca Ser	act Thr 16135	cgg Arg	ccc Pro	cta Leu	tgt Cys	aat Asn 16140	gta Val	aac Asn	gaa Glu	tgg Trp	88834
aaa Lys 16145	cat His	ttt Phe	cgc Arg	gtg Val	ttg Leu 16150	gtg Val	tac Tyr	act Thr	acc Thr	gtc Val 16155	gtg Val	acc Thr	gtt Val	gga Gly	88879
ttg Leu 16160	agt Ser	ttt Phe	gac Asp	atg Met	gct Ala 16165	cat His	ttt Phe	cat His	agc Ser	atg Met 16170	ttt Phe	gct Ala	tac Tyr	ata Ile	88924
aag Lys 16175	cca Pro	atg Met	tca Ser	tat Tyr	ggg Gly 16180	ccg Pro	gat Asp	atg Met	gta Val	tcg Ser 16185	gtc Val	tac Tyr	cag Gln	tca Ser	88969
tta Leu 16190	ggg Gly	cgt Arg	gta Val	cgt Arg	tta Leu 16195	ttg Leu	cta Leu	ctt Leu	aat Asn	gaa Glu 16200	gtt Val	ttg Leu	atg Met	tac Tyr	89014
gtc Val 16205	gat Asp	ggc Gly	tca Ser	agg Arg	acc Thr 16210	aga Arg	tgc Cys	gga Gly	ccc Pro	ctg Leu 16215	ttc Phe	tcg Ser	cca Pro	atg Met	89059

tta Leu 16220	cta Leu	aac Asn	ttt Phe	acc Thr	atc Ile 16225	gca Ala	aat Asn	aaa Lys	ttt Phe 16230	caa Gln	tgg Trp	ttt Phe	cct Pro	aca Thr	89104
cac His 16235	acc Thr	caa Gln	ata Ile	act Thr	aac Asn 16240	aaa Lys	ctg Leu	tgc Cys	tgt Cys	gca Ala 16245	ttt Phe	agg Arg	caa Gln	cga Arg	89149
tgt Cys 16250	gca Ala	aat Asn	gca Ala	ttt Phe 16255	aca Thr	cgc Arg	tcg Ser	aac Asn	acc Thr	cat His 16260	ctc Leu	ttc Phe	tca Ser	aga Arg	89194
ttt Phe 16265	aaa Lys	tac Tyr	aaa Lys	cac His	ctt Leu 16270	ttc Phe	gag Glu	aga Arg	tgc Cys	tct Ser 16275	ctt Leu	tgg Trp	agt Ser	tta Leu	89239
gcc Ala 16280	gat Asp	agc Ser	att Ile	aat Asn	atc Ile 16285	tta Leu	caa Gln	act Thr	ctt Leu	ttg Leu 16290	gcc Ala	tct Ser	aac Asn	caa Gln	89284
att Ile 16295	ttg Leu	gtt Val	gta Val	ttg Leu	gat Asp 16300	ggc Gly	atg Met	ggt Gly	cca Pro	ata Ile 16305	acg Thr	gac Asp	gtt Val	tcc Ser	89329
cca Pro 16310	gtt Val	caa Gln	ttt Phe	tgt Cys	gca Ala 16315	ttt Phe	ata Ile	cac His	gat Asp	ctc Leu 16320	aga Arg	cat His	agc Ser	gct Ala	89374
aac Asn 16325	gcc Ala	gta Val	gct Ala	tcc Ser	tgt Cys 16330	atg Met	cgt Arg	tct Ser	ctt Leu	aga Arg 16335	cag Gln	gac Asp	aat Asn	gac Asp	89419
agc Ser 16340	tgc Cys	ttg Leu	acc Thr	gat Asp	ttt Phe 16345	ggc Gly	cct Pro	tcc Ser	gga Gly	ttt Phe 16350	atg Met	gcc Ala	gat Asp	aac Asn	89464
att Ile 16355	acc Thr	gcg Ala	ttt Phe	atg Met	gaa Glu 16360	aag Lys	tat Tyr	ctt Leu	atg Met	gag Glu 16365	tca Ser	att Ile	aat Asn	acc Thr	89509
gaa Glu 16370	gaa Glu	caa Gln	att Ile	aaa Lys	gta Val 16375	ttt Phe	aaa Lys	gcc Ala	ctt Leu	gca Ala 16380	tgt Cys	cca Pro	ata Ile	gaa Glu	89554
cag Gln 16385	cct Pro	aga Arg	cta Leu	gtc Val	aat Asn 16390	acg Thr	gca Ala	ata Ile	ttg Leu	ggg Gly 16395	gcg Ala	tgt Cys	ata Ile	cga Arg	89599
ata Ile 16400	cct Pro	gaa Glu	gcg Ala	ttg Leu	gaa Glu 16405	gca Ala	ttt Phe	gac Asp	gta Val	ttt Phe 16410	caa Gln	aaa Lys	ata Ile	tac Tyr	89644
acg Thr 16415	cac His	tac Tyr	gct Ala	tcc Ser	ggt Gly 16420	tgg Trp	ttt Phe	ccc Pro	gtc Val	ctg Leu 16425	gac Asp	aaa Lys	acc Thr	ggg Gly	89689
gaa Glu 16430	ttt Phe	agc Ser	atc Ile	gcg Ala	act Thr 16435	ata Ile	act Thr	acc Thr	gcc Ala	cca Pro 16440	aat Asn	tta Leu	acc Thr	aca Thr	89734

cat His 16445	tgg Trp	gag Glu	ctg Leu	ttt Phe	cgc Arg 16450	cgt Arg	tgt Cys	gcc Ala	tat Tyr	att Ile 16455	gca Ala	aaa Lys	aca Thr	ctc Leu	89779
aag Lys 16460	tgg Trp	aat Asn	ccg Pro	tcc Ser	acc Thr 16465	gaa Glu	ggc Gly	tgt Cys	gta Val	aca Thr 16470	caa Gln	gtt Val	ttg Leu	gat Asp	89824
acg Thr 16475	gac Asp	att Ile	aat Asn	aca Thr	ctt Leu 16480	ttc Phe	aat Asn	caa Gln	cac His	ggg Gly 16485	gat Asp	tcg Ser	ctg Leu	gct Ala	89869
caa Gln 16490	cta Leu	ata Ile	ttt Phe	gag Glu	gtt Val 16495	atg Met	cgc Arg	tgt Cys	aac Asn	gtt Val 16500	act Thr	gac Asp	gct Ala	aag Lys	89914
att Ile 16505	ata Ile	tta Leu	aac Asn	cgc Arg	ccg Pro 16510	gtt Val	tgg Trp	cga Arg	aca Thr	acc Thr 16515	gga Gly	ttc Phe	tta Leu	gat Asp	89959
gga Gly 16520	tgc Cys	cat His	aat Asn	caa Gln	tgc Cys 16525	ttc Phe	cgt Arg	cca Pro	atc Ile	cct Pro 16530	aca Thr	aaa Lys	cac His	gaa Glu	90004
tat Tyr 16535	aac Asn	att Ile	gct Ala	cta Leu	ttt Phe 16540	cgt Arg	tta Leu	att Ile	tgg Trp	gaa Glu 16545	caa Gln	tta Leu	ttt Phe	ggc Gly	90049
gcc Ala 16550	cgc Arg	gta Val	act Thr	aaa Lys	agt Ser 16555	acc Thr	cag Gln	acc Thr	ttt Phe	ccg Pro 16560	gga Gly	agt Ser	act Thr	cgt Arg	90094
gtg Val 16565	aaa Lys	aac Asn	cta Leu	aaa Lys	aaa Lys 16570	aaa Lys	gat Asp	cta Leu	gaa Glu	act Thr 16575	tta Leu	ctt Leu	gat Asp	tca Ser	90139
att Ile 16580	aac Asn	gtg Val	gat Asp	cgt Arg	tct Ser 16585	gca Ala	tgt Cys	cgt Arg	acc Thr	tac Tyr 16590	cgc Arg	cag Gln	ttg Leu	tat Tyr	90184
aac Asn 16595	ctg Leu	ctt Leu	atg Met	agc Ser	cag Gln 16600	cgc Arg	cat His	tcg Ser	ttc Phe	tct Ser 16605	caa Gln	cag Gln	cgt Arg	tac Tyr	90229
aaa Lys 16610	att Ile	act Thr	gcc Ala	ccc Pro	gct Ala 16615	tgg Trp	gca Ala	cgc Arg	cac His	gtg Val 16620	tat Tyr	ttt Phe	caa Gln	gca Ala	90274
cat His 16625	caa Gln	atg Met	cac His	ttg Leu	gcc Ala 16630	ccg Pro	cat His	gcc Ala	gaa Glu	gcc Ala 16635	atg Met	cta Leu	caa Gln	tta Leu	90319
gcg Ala 16640	cta Leu	tcg Ser	gaa Glu	ctg Leu	tcc Ser 16645	ccg Pro	gga Gly	tcg Ser	tgg Trp	ccg Pro 16650	cgg Arg	ata Ile	aac Asn	ggg Gly	90364
gcg Ala 16655	gta Val	aat Asn	ttt Phe	gaa Glu	agt Ser 16660	tta Leu	taa	cccg	ttta	ata	ccat	atat	atgg		90408

acatccatag ggggggttac ataaatacta agcctctgta caacacaaag ggcctctaac 90468

gtt aga gaa agc gga cac att tgt gcc gca agc ata tac aca tcc 90561
Val Arg Glu Ser Gly His Ile Cys Ala Ala Ser Ile Tyr Thr Ser
16670 16675 16680

tac tac tta tta tgc aaa aac tca tgt ggg aaa tac gtc cct aag 90651
Tyr Tyr Leu Leu Cys Lys Asn Ser Cys Gly Lys Tyr Val Pro Lys
16700 16705 16710

agg cat ggg ggg agt gtt tct gcg gca acg ttt gcg tct atc tgc 90741
Arg His Gly Gly Ser Val Ser Ala Ala Thr Phe Ala Ser Ile Cys
16730 16735 16740

ctg ggt aac gca gac acc tgg cgt tgt ctc cat ggc act gcc ctg 90831
Leu Gly Asn Ala Asp Thr Trp Arg Cys Leu His Gly Thr Ala Leu
16760 16765 16770

gta aca ttc gag act gat acg aat aca ggt ctt ctg tta aaa aca 90921
Val Thr Phe Glu Thr Asp Thr Asn Thr Gly Leu Leu Leu Lys Thr
16790 16795 16800

gga gta ttg agg gct aat ttt ccc gtg gcc att gat gtt tca gca 91011
Gly Val Leu Arg Ala Asn Phe Pro Val Ala Ile Asp Val Ser Ala
16820 16825 16830

gcc cgc ctg acc gca ctt aaa tct aac ggt gac acc cag caa caa 91101
Ala Arg Leu Thr Ala Leu Lys Ser Asn Gly Asp Thr Gln Gln Gln
16850 16855 16860

16865		16870		16875	
cgg	aaa	tat	aag	tct	acg
Arg	Lys	Tyr	Lys	Ser	Thr
16880					16885
caa	acc	tcc	gat	ttg	ttt
Gln	Thr	Ser	Asp	Leu	Phe
16895					16900
agt	ggc	aat	cgc	gca	att
Ser	Gly	Asn	Arg	Ala	Ile
16910					16915
ttt	gac	tgt	tta	aca	acg
Phe	Asp	Cys	Leu	Thr	Thr
16925					16930
ata	tta	gca	aca	tat	aga
Ile	Leu	Ala	Thr	Tyr	Arg
16940					16945
ccc	ggg	gtt	gtc	cgt	cca
Pro	Gly	Val	Val	Arg	Pro
16955					16960
aat	ccg	aag	ggt	gaa	gac
Asn	Pro	Lys	Gly	Glu	Asp
16970					16975
ccc	gga	tgg	acc	act	ctt
Pro	Gly	Trp	Thr	Thr	Leu
16985					16990
att	cgc	acg	gct	acg	gag
Ile	Arg	Thr	Ala	Thr	Glu
17000					17005
cca	gta	acc	ggt	att	cag
Pro	Val	Thr	Gly	Ile	Gln
17015					17020
cag	cat	ccc	ccc	tta	cct
Gln	His	Pro	Pro	Leu	Pro
17030					17035
atc	cct	caa	gat	act	gga
Ile	Pro	Gln	Asp	Thr	Gly
17045					17050
gcg	ggc	cgg	ata	tct	acc
Ala	Gly	Arg	Ile	Ser	Thr
17060					17065
gat	cgt	tgg	atg	gca	aag
Asp	Arg	Trp	Met	Ala	Lys
17075					17080
ata	tac	tgc	gct	atg	ttc
Ile	Tyr	Cys	Ala	Met	Phe

17090		17095		17100	
gtc	ctg gct aga atg cgt	cga gga atg ggg tgc	cta aaa ccc gcg	91866	
Val	Leu Ala Arg Met Arg	Arg Gly Met Gly Cys	Leu Lys Pro Ala		
17105		17110		17115	
ttg	gtg tct ttt ttt ggg	ggg tta cgg cac ata	ctc ccg agt ata	91911	
Leu	Val Ser Phe Phe Gly	Gly Leu Arg His Ile	Leu Pro Ser Ile		
17120		17125		17130	
tac	aaa gct att att ttt	ata gcc aat gaa att	agc ctt tgc gtc	91956	
Tyr	Lys Ala Ile Ile Phe	Ile Ala Asn Glu Ile	Ser Leu Cys Val		
17135		17140		17145	
gaa	caa acg gcc ttg gaa	cag ggc ttt gct ata	tgt act tat ata	92001	
Glu	Gln Thr Ala Leu Glu	Gln Gly Phe Ala Ile	Cys Thr Tyr Ile		
17150		17155		17160	
aaa	gat gga ttt tgg gga	atc ttc acc gat tta	cat acg cgc aat	92046	
Lys	Asp Gly Phe Trp Gly	Ile Phe Thr Asp Leu	His Thr Arg Asn		
17165		17170		17175	
gta	tgt tca gat cag gca	cgt tgt tcg gcc tta	aat tta gcg gcc	92091	
Val	Cys Ser Asp Gln Ala	Arg Cys Ser Ala Leu	Asn Leu Ala Ala		
17180		17185		17190	
acc	tgc gaa aga gca gtc	acg ggc tta tta cga	att caa cta ggt	92136	
Thr	Cys Glu Arg Ala Val	Thr Gly Leu Leu Arg	Ile Gln Leu Gly		
17195		17200		17205	
ctt	aac ttt aca ccc gcc	atg gaa ccg gta ctc	cgg gtc gag ggt	92181	
Leu	Asn Phe Thr Pro Ala	Met Glu Pro Val Leu	Arg Val Glu Gly		
17210		17215		17220	
gtg	tac act cac gca ttt	acc tgg tgt acc acg	gga agc tgg ctg	92226	
Val	Tyr Thr His Ala Phe	Thr Trp Cys Thr Thr	Gly Ser Trp Leu		
17225		17230		17235	
tgg	aat tta caa aca aac	acg cct ccg gat tta	gtt ggc gtg cca	92271	
Trp	Asn Leu Gln Thr Asn	Thr Pro Pro Asp Leu	Val Gly Val Pro		
17240		17245		17250	
tgg	cga agt cag gcg gcg	cga gat tta aag gag	cgt ctt tca gga	92316	
Trp	Arg Ser Gln Ala Ala	Arg Asp Leu Lys Glu	Arg Leu Ser Gly		
17255		17260		17265	
ctc	cta tgt acc gca aca	aaa att cga gaa cgg	ata cag gaa aat	92361	
Leu	Leu Cys Thr Ala Thr	Lys Ile Arg Glu Arg	Ile Gln Glu Asn		
17270		17275		17280	
tgc	ata tgg gac cat gtc	cta tac gac ata tgg	gcc gga caa gtt	92406	
Cys	Ile Trp Asp His Val	Leu Tyr Asp Ile Trp	Ala Gly Gln Val		
17285		17290		17295	
gtg	gag gct gcc aga aaa	aca tac gtc gat ttt	ttt gaa cat gtt	92451	
Val	Glu Ala Ala Arg Lys	Thr Tyr Val Asp Phe	Phe Glu His Val		
17300		17305		17310	
ttt	gat cgc cgt tat act	ccg gta tac tgg agt	ctt cag gag caa	92496	
Phe	Asp Arg Arg Tyr Thr	Pro Val Tyr Trp Ser	Leu Gln Glu Gln		

17315		17320		17325		
aat	tcg gaa aca aaa gca	ata ccg gca tct tat	ctg aca tac gga	92541		
Asn	Ser Glu Thr Lys Ala	Ile Pro Ala Ser Tyr	Leu Thr Tyr Gly			
17330		17335		17340		
cac	atg caa gat aag gat	tat aaa cca aga cag	ata att atg gtt	92586		
His	Met Gln Asp Lys Asp	Tyr Lys Pro Arg Gln	Ile Ile Met Val			
17345		17350		17355		
cgt	aat ccc aac cca cat	gga cct cct act gtt	gtt tac tgg gaa	92631		
Arg	Asn Pro Asn Pro His	Gly Pro Pro Thr Val	Val Tyr Trp Glu			
17360		17365		17370		
ttg	cta cca tcg tgt gcc	tgt att ccc ccc ata	gac tgc gct gct	92676		
Leu	Leu Pro Ser Cys Ala	Cys Ile Pro Pro Ile	Asp Cys Ala Ala			
17375		17380		17385		
cat	ctc aag ccc ctt ata	cac acg ttt gtc act	att att aac cat	92721		
His	Leu Lys Pro Leu Ile	His Thr Phe Val Thr	Ile Ile Asn His			
17390		17395		17400		
ctt	cta gat gct cat aat	gat ttt tca agt cca	tca ttg aaa ttt	92766		
Leu	Leu Asp Ala His Asn	Asp Phe Ser Ser Pro	Ser Leu Lys Phe			
17405		17410		17415		
act	gac gat ccc ctt gct	tca tat aac ttc ttg	ttt tta tga	92808		
Thr	Asp Asp Pro Leu Ala	Ser Tyr Asn Phe Leu	Phe Leu			
17420		17425		17430		
caaaaaaaca	cgccgcaaca	acccatcctt	aaaataaaaag	gtttattttac	tttacaaccc	92868
gtggtgaatt	tttatacggt	tcaaataact	gaacattttt	cggtgttacc	atggtgcgat	92928
ttaaccacca	aaaatatagc	ctcttctgat	attccgaatc	tcgtaaaggt	ccatttaaca	92988
atcccggggg	tacttgcacc	acaccatctg	gacagggggg	ggttccgtgg	ggcaggtcaa	93048
aacgctgacc	caccccat	gaatatatag	cctttataat	attggggggc	gttccaggct	93108
gagggttcag	taacttaaca	aacatataat	gcggaatac	gcgggttttt	gtaaaggggt	93168
tggtatcaac	gacatacatt	agagtgttta	acaaccataa	aactccctca	tataaaaacc	93228
gacgcatttt	ttccaaaggt	cctatttgac	actcaacgcg	tctaagatat	acagacaatt	93288
gtacaaacag	cgatggagat	gccccggagg	gccaatgcc	ttccagatac	attaaaataa	93348
cacataaggt	aaaatctagg	acattatccg	ggcggaatag	agtcatccga	tagattaaca	93408
ggcgcgagg	cacccccacc	gtatacacc	tatcttcaac	cgcagttaat	acggaaaaaa	93468
taaatccgcg	gaacgctgg	tgagtaacac	actccatgta	gtaacgatca	caggacacct	93528
cacttgaatc	accattcaac	actactaaaa	cggtctcttg	gtgttccgg	tttacgcgca	93588
gtgatacaac	agagtttgcc	aaaaagcgtg	gcttcaaacc	ggttacctcc	cgcgcctcgc	93648
atacgaatct	tggtattgct	tgtattctaa	gatcttcgat	cacgtcgtc	acatccaacc	93708

cctcttcggc	tcgtgttagt	aagttgtcga	tcgttacgct	gcaacctaaa	atgctgggta	93768
tatttatcc	ggacatccca	tcggccatcc	ccgcgcctcc	ggtttgctcg	aattttatcc	93828
agtaaggctg	aatccgctgc	atttaccttg	tgtacccgta	acctctcagg	ggggtgtcct	93888
ttcataaaat	gggatagggt	tttatatcca	acatgcatgt	attgggttatt	tattttattg	93948
ggttccggga	ttctttcgtc	atcttctgta	gggtcaggca	aaccccagga	aggacttggt	94008
gttctccgtg	ggccccgttt	tattacctct	gcgcgaacct	gcatttcata	taatattcgg	94068
atttgggata	aataggactc	tgttctcgcc	tttttaaaaa	tagcctggca	taactcttcc	94128
tctgacctat	gtacctcgct	ttgagttacc	aagaatccta	atcgggtggc	ccgtaatatg	94188
aatgaaaaat	acggcgcaac	tagtaatgag	attgacgcat	ttgaatatga	tacagaaatt	94248
tcctggcctt	gattattggt	tacccggtga	agcttaaaac	agcgaacaag	ttcctgtttc	94308
catagctcag	acaaacgttt	tatatcatct	ccataagggg	ggatataacg	agattgaaaa	94368
ctattggcaa	tatatgcatc	atcccctatt	atgccggtaa	gatctataac	ctcgtgattt	94428
aaatcggcaa	tacgtgtttc	ttctgccatt	gtaatatgtg	accctttaga	tggctttatt	94488
tttacctct	cttcccgtaa	ccgtttcagc	tctccttctt	tgaactggag	cctttcggtc	94548
agatcgctgt	tcacatcctt	gagaccctca	atggttttga	ataaattatt	cacataaccc	94608
tcgagcatgc	cgttgatact	gttaaccacc	gaagttttaa	acgcactttg	aacgtttggt	94668
gttccggaca	ttgccccccc	gttaaaggat	tggttggcct	tgccaaaccc	cggttgtgat	94728
gtgtccaccg	atccacttcc	ttccagaatg	tgattgcccg	tttcttctag	ataggaacgt	94788
acggtttcgg	taatatctcc	aacatgtctc	atgtttttta	agttaactat	tagctttaca	94848
agtctagacg	cggccgatcc	agcccgtggt	gtatcgttct	cgcccattat	acgatcaacc	94908
gcacgtgtgc	tgtgagatct	atcatcttca	ttccggcgac	ctattaacac	gcgcaaaggg	94968
gctgtattta	aaacttggca	gacgcgagca	tgttcacgta	atgcataaca	ggccaacacc	95028
tccccagaaa	gccgctgtaa	gggtgagtca	aatactacac	cctccccaca	tacaacgggc	95088
ggccacacga	ccaaacactc	tcccttcatg	cccgttacat	catcctttgc	cataattaat	95148
cttcggttat	aattataata	aagacgcgtc	ctatcataat	ccataatagc	aacattttgc	95208
atacactcaa	ctaggcttgt	gacaaccgcc	gctcctctgg	ccaacgttgc	atcggcaact	95268
tttaacatct	gggacagttc	tgccgcttga	cccatatacg	tattttaatgg	tgcagggggt	95328
ccattctgtt	ctgatcgtag	ctttcttaca	acgggcacaa	tacctacaca	ggctatccag	95388
tccacgtatt	tggcaaaacc	gacccttcca	tttaaaccac	tggtatagag	acaaccggtt	95448
attccacgca	gaaactcaag	taacgatgac	tgtaatgttt	gacgccaggt	ttcaaaaacc	95508

tgatgtgcaa gccgtacggc ttctgattct ccacatagcc cataacgttc cgctagagcc	95568
ccggcatgca ggttacattg ttggatgtgg tgttcccaat ctgctgctag gtcctcatac	95628
cgagttgcat ccaacgcggt catcaaaaacg gttgcctgaa cttggcgaat tacagtttcc	95688
gtagaccgta cagcgctata tatgccttgt ccatcggtat atccaaagtc accggctagg	95748
atttttcgaa acaacatact ttgcgtgggt ggggtgtatta acatccagcc atcttcctcc	95808
ggaaatgtac aaaaccctat atccggggcg tactcattcc agtatatatc gaacatgttc	95868
ttgtattgggt catttggggt acttccattc aagccctgggt caatagaaac agaacttgct	95928
atcctttttt cttcactacc ggaactgtta ttaaaaagag acgttatttc ggccattgaa	95988
aaccacg atg aaa aga tca att tct gta gac agt tct tca ccc aaa	96034
Met Lys Arg Ser Ile Ser Val Asp Ser Ser Ser Pro Lys	
17435 17440 17445	
aac gtt ttt aat cca gag acg ccc aat gga ttt gat gac agt gta	96079
Asn Val Phe Asn Pro Glu Thr Pro Asn Gly Phe Asp Asp Ser Val	
17450 17455 17460	
tat tta aac ttc acc tct atg cat agc att caa cct atc ctc tca	96124
Tyr Leu Asn Phe Thr Ser Met His Ser Ile Gln Pro Ile Leu Ser	
17465 17470 17475	
cgg att cga gaa ctt gcc gca att acg att cca aaa gaa cgt gtt	96169
Arg Ile Arg Glu Leu Ala Ala Ile Thr Ile Pro Lys Glu Arg Val	
17480 17485 17490	
ccg cgg ttg tgt tgg ttt aaa cag tta ctc gaa ctg caa gcg cct	96214
Pro Arg Leu Cys Trp Phe Lys Gln Leu Leu Glu Leu Gln Ala Pro	
17495 17500 17505	
cct gaa atg cag agg aat gag ctc ccc ttc tcc gtt tat tta att	96259
Pro Glu Met Gln Arg Asn Glu Leu Pro Phe Ser Val Tyr Leu Ile	
17510 17515 17520	
agc gga aat gcc ggc tcc gga aaa agc acg tgt atc caa acg ctt	96304
Ser Gly Asn Ala Gly Ser Gly Lys Ser Thr Cys Ile Gln Thr Leu	
17525 17530 17535	
aac gaa gct atc gat tgc att att acc gga tcc acc agg gtt gct	96349
Asn Glu Ala Ile Asp Cys Ile Ile Thr Gly Ser Thr Arg Val Ala	
17540 17545 17550	
gcc caa aat gtt cat gct aag tta tca acg gct tat gcg agt cgt	96394
Ala Gln Asn Val His Ala Lys Leu Ser Thr Ala Tyr Ala Ser Arg	
17555 17560 17565	
ccg ata aac aca atc ttt cat gaa ttt ggt ttt cgc gga aat cac	96439
Pro Ile Asn Thr Ile Phe His Glu Phe Gly Phe Arg Gly Asn His	
17570 17575 17580	
att cag gct cag ctg ggc cgt tac gca tat aac tgg act acg acc	96484
Ile Gln Ala Gln Leu Gly Arg Tyr Ala Tyr Asn Trp Thr Thr Thr	
17585 17590 17595	

ccc cct tct att gag	gac ctg caa aaa aga	gat att gta tac tac	96529
Pro Pro Ser Ile Glu	Asp Leu Gln Lys Arg	Asp Ile Val Tyr Tyr	
17600	17605	17610	
tgg gaa gtt tta att	gat ata aca aaa cga	gtg ttt caa atg ggg	96574
Trp Glu Val Leu Ile	Asp Ile Thr Lys Arg	Val Phe Gln Met Gly	
17615	17620	17625	
gac gac ggt cgc gga	gga aca tcg aca ttt	aaa acc ctg tgg gca	96619
Asp Asp Gly Arg Gly	Gly Thr Ser Thr Phe	Lys Thr Leu Trp Ala	
17630	17635	17640	
att gaa cgt ttg ctt	aat aaa cct aca ggc	tca atg tcc gga acc	96664
Ile Glu Arg Leu Leu	Asn Lys Pro Thr Gly	Ser Met Ser Gly Thr	
17645	17650	17655	
gcg ttt atc gca tgc	ggg tcc ctt ccg gct	ttt acc cgg agc aac	96709
Ala Phe Ile Ala Cys	Gly Ser Leu Pro Ala	Phe Thr Arg Ser Asn	
17660	17665	17670	
gtt att gtt att gat	gaa gca gga ttg cta	ggg cgt cat att ctc	96754
Val Ile Val Ile Asp	Glu Ala Gly Leu Leu	Gly Arg His Ile Leu	
17675	17680	17685	
acg gcc gtt gtt tac	tgt tgg tgg ctt ttg	aat gct ata tat caa	96799
Thr Ala Val Val Tyr	Cys Trp Trp Leu Leu	Asn Ala Ile Tyr Gln	
17690	17695	17700	
agc cct cag tac ata	aac ggt cga aaa ccg	gtc ata gta tgc gtc	96844
Ser Pro Gln Tyr Ile	Asn Gly Arg Lys Pro	Val Ile Val Cys Val	
17705	17710	17715	
ggg tgc ccc acc caa	act gac tcg tta gaa	tct cat ttt caa cat	96889
Gly Ser Pro Thr Gln	Thr Asp Ser Leu Glu	Ser His Phe Gln His	
17720	17725	17730	
gac atg cag cgt tca	cac gta act cct agt	gaa aat ata ctc acg	96934
Asp Met Gln Arg Ser	His Val Thr Pro Ser	Glu Asn Ile Leu Thr	
17735	17740	17745	
tat ata atc tgc aat	caa act ctg cgt caa	tat act aac atc tca	96979
Tyr Ile Ile Cys Asn	Gln Thr Leu Arg Gln	Tyr Thr Asn Ile Ser	
17750	17755	17760	
cat aac tgg gca atc	ttt att aat aac aaa	cga tgt caa gag gac	97024
His Asn Trp Ala Ile	Phe Ile Asn Asn Lys	Arg Cys Gln Glu Asp	
17765	17770	17775	
gat ttt gga aat ctt	tta aaa acg ctt gag	tac ggg cta cct att	97069
Asp Phe Gly Asn Leu	Leu Lys Thr Leu Glu	Tyr Gly Leu Pro Ile	
17780	17785	17790	
acc gaa gca cat gcg	cgt ctg gtc gat aca	ttt gtt gta cct gca	97114
Thr Glu Ala His Ala	Arg Leu Val Asp Thr	Phe Val Val Pro Ala	
17795	17800	17805	
tcc tat att aac aat	cct gct aat ctt ccc	gga tgg acg cgt ctg	97159
Ser Tyr Ile Asn Asn	Pro Ala Asn Leu Pro	Gly Trp Thr Arg Leu	
17810	17815	17820	

tat tcg tcg cat aag	gag gtg agc gcg tat	atg agt aag tta cac	97204
Tyr Ser Ser His Lys	Glu Val Ser Ala Tyr	Met Ser Lys Leu His	
17825	17830	17835	
gcg cat tta aaa cta	tcg aaa aat gac cat	ttt tct gtg ttt gcc	97249
Ala His Leu Lys Leu	Ser Lys Asn Asp His	Phe Ser Val Phe Ala	
17840	17845	17850	
tta ccg act tat aca	ttc atc cgg cta acg	gca ttt gat gaa tac	97294
Leu Pro Thr Tyr Thr	Phe Ile Arg Leu Thr	Ala Phe Asp Glu Tyr	
17855	17860	17865	
cgc aaa tta acg gga	caa ccc gga ctt tct	gtt gaa cat tgg ata	97339
Arg Lys Leu Thr Gly	Gln Pro Gly Leu Ser	Val Glu His Trp Ile	
17870	17875	17880	
cgg gca aac tcc ggt	cgt ttg cac aat tat	tcc caa agc cga gat	97384
Arg Ala Asn Ser Gly	Arg Leu His Asn Tyr	Ser Gln Ser Arg Asp	
17885	17890	17895	
cat gac atg gga aca	gtt aaa tac gaa aca	cat tca aat cgc gac	97429
His Asp Met Gly Thr	Val Lys Tyr Glu Thr	His Ser Asn Arg Asp	
17900	17905	17910	
tta att gta gcc cgt	aca gac atc act tac	gtg cta aat agt ctc	97474
Leu Ile Val Ala Arg	Thr Asp Ile Thr Tyr	Val Leu Asn Ser Leu	
17915	17920	17925	
gta gtt gta acc aca	aga cta cgt aag tta	gtt att gga ttc agt	97519
Val Val Val Thr Thr	Arg Leu Arg Lys Leu	Val Ile Gly Phe Ser	
17930	17935	17940	
ggt aca ttt caa tcg	ttt gca aag gtt tta	cgt gac gac tcc ttt	97564
Gly Thr Phe Gln Ser	Phe Ala Lys Val Leu	Arg Asp Asp Ser Phe	
17945	17950	17955	
gtg aag gct cga gga	gag aca tcc atc gaa	tat gct tac cgg ttt	97609
Val Lys Ala Arg Gly	Glu Thr Ser Ile Glu	Tyr Ala Tyr Arg Phe	
17960	17965	17970	
ctg tca aac cta atc	ttt gga ggc ttg att	aac ttt tac aat ttt	97654
Leu Ser Asn Leu Ile	Phe Gly Gly Leu Ile	Asn Phe Tyr Asn Phe	
17975	17980	17985	
ttg tta aat aaa aac	cta cat ccc gat aag	gta tcg tta gca tac	97699
Leu Leu Asn Lys Asn	Leu His Pro Asp Lys	Val Ser Leu Ala Tyr	
17990	17995	18000	
aaa cgg tta gct gcc	tta acc ctg gag tta	ttg tct gga aca aac	97744
Lys Arg Leu Ala Ala	Leu Thr Leu Glu Leu	Leu Ser Gly Thr Asn	
18005	18010	18015	
aaa gcc ccc tta cac	gaa gca gcg gtt aat	ggg gcg ggt gcc ggg	97789
Lys Ala Pro Leu His	Glu Ala Ala Val Asn	Gly Ala Gly Ala Gly	
18020	18025	18030	
att gac tgt gat ggt	gca gct act tct gcc	gat aaa gcc ttc tgc	97834
Ile Asp Cys Asp Gly	Ala Ala Thr Ser Ala	Asp Lys Ala Phe Cys	
18035	18040	18045	

ttt acc aaa gcc ccc	gag tcc aaa gta acg	gcc tcc ata ccc gaa	97879
Phe Thr Lys Ala Pro	Glu Ser Lys Val Thr	Ala Ser Ile Pro Glu	
18050	18055	18060	
gac ccg gat gat gta	att ttt acg gca ctt	aac gac gag gtt att	97924
Asp Pro Asp Asp Val	Ile Phe Thr Ala Leu	Asn Asp Glu Val Ile	
18065	18070	18075	
gac ttg gta tac tgc	cag tac gaa ttt tcc	tat ccc aaa tca tcc	97969
Asp Leu Val Tyr Cys	Gln Tyr Glu Phe Ser	Tyr Pro Lys Ser Ser	
18080	18085	18090	
aat gag gtc cat gct	cag ttt ctg tta atg	aaa gct att tac gat	98014
Asn Glu Val His Ala	Gln Phe Leu Leu Met	Lys Ala Ile Tyr Asp	
18095	18100	18105	
ggt cga tat gcc ata	tta gca gag ctt ttc	gaa agc agc ttt aca	98059
Gly Arg Tyr Ala Ile	Leu Ala Glu Leu Phe	Glu Ser Ser Phe Thr	
18110	18115	18120	
acc gcc ccc ttt agc	gcg tat gtc gat aat	gtt aat ttc aac gga	98104
Thr Ala Pro Phe Ser	Ala Tyr Val Asp Asn	Val Asn Phe Asn Gly	
18125	18130	18135	
agc gag ctt ttg atc	ggc aat gtg cgg ggg	ggg ctg tta tct ttg	98149
Ser Glu Leu Leu Ile	Gly Asn Val Arg Gly	Gly Leu Leu Ser Leu	
18140	18145	18150	
gca tta caa aca gat	acg tat acc ctt ttg	ggg tat act ttt gca	98194
Ala Leu Gln Thr Asp	Thr Tyr Thr Leu Leu	Gly Tyr Thr Phe Ala	
18155	18160	18165	
ccc gtg cca gtc ttt	gta gag gaa ctg acc	cga aaa aag ctg tac	98239
Pro Val Pro Val Phe	Val Glu Glu Leu Thr	Arg Lys Lys Leu Tyr	
18170	18175	18180	
cgc gaa act acc gaa	atg tta tat gct cta	cac gta cct ctt atg	98284
Arg Glu Thr Thr Glu	Met Leu Tyr Ala Leu	His Val Pro Leu Met	
18185	18190	18195	
gtc tta cag gat caa	cat ggg ttt gtg tcc	atc gta aac gct aac	98329
Val Leu Gln Asp Gln	His Gly Phe Val Ser	Ile Val Asn Ala Asn	
18200	18205	18210	
gta tgt gaa ttt acc	gag tct ata gag gat	gca gaa ttg gca atg	98374
Val Cys Glu Phe Thr	Glu Ser Ile Glu Asp	Ala Glu Leu Ala Met	
18215	18220	18225	
gcc acc acg gtg gac	tat ggc ctt agt tct	aaa cta gcc atg aca	98419
Ala Thr Thr Val Asp	Tyr Gly Leu Ser Ser	Lys Leu Ala Met Thr	
18230	18235	18240	
att gca cgc tca cag	ggt ctg agt tta gag	aag gta gct atc tgt	98464
Ile Ala Arg Ser Gln	Gly Leu Ser Leu Glu	Lys Val Ala Ile Cys	
18245	18250	18255	
ttt acg gcg gat aaa	ctg cgc cta aat agt	gtg tat gtt gcc atg	98509
Phe Thr Ala Asp Lys	Leu Arg Leu Asn Ser	Val Tyr Val Ala Met	
18260	18265	18270	

tcg cgt acg gtc tcc	tct agg ttc tta aaa	atg aat cta aac cct	98554
Ser Arg Thr Val Ser	Ser Arg Phe Leu Lys	Met Asn Leu Asn Pro	
18275	18280	18285	
cta cgg gaa cga tat	gaa aaa tcc gca gaa	att agc gat cac att	98599
Leu Arg Glu Arg Tyr	Glu Lys Ser Ala Glu	Ile Ser Asp His Ile	
18290	18295	18300	
ctt gcc gct cta cgt	gat ccc aac gta cac	gtt gtg tat taa	98641
Leu Ala Ala Leu Arg	Asp Pro Asn Val His	Val Val Tyr	
18305	18310		
agcattgtat aaaaacacgc	atgcgggctt gctgttctca	tttctagggtt ttgtcttaaa	98701
tacacccgcc atgagcatct	ctggaccccc aacgacgttt	attttatata ggttacatgg	98761
ggttaggcgg gttcttcact	ggactttacc ggatcatgaa	caaacactct acgcatttac	98821
gggtgggtca agatcaatgg	cggtgaagac ggacgctcga	tgtgatacaa tgagcgggtgg	98881
tatgatcgtc cttcaacaca	cccatacagt gaccctgcta	accatagact gttctactga	98941
cttttcatca tacgcattta	cgcaccggga tttccactta	caggacaaac cccacgcaac	99001
atttgcgatg ccgtttatgt	cctgggtcgg ttctgacca	acatctcagc tgtacagtaa	99061
tgtggggggg gtactatccg	taataacgga agatgaccta	tccatgtgta tctcaattgt	99121
tatatacggg ttacgggtaa	acagacctga cgatcagacc	acaccaacac caaccccgca	99181
ccagtataca tcgcaaaggc	ggcagcctga aaccaactgt	ccttcttcac cacaaccggc	99241
ctttttcaca tcagacgacg	acgttctttc gttaatatta	cgggacgccg caaacgcgta	99301
aagacagatt caagactaac	atttatccca actgattaca	tttcatacgc gaataaacga	99361
cacaaaaaat ttatattta	cggttttta tttgaagaca	cctatcctct taacgttgat	99421
gagccttgca gggtgggtgc	cgcgcttcac cggtattata	cataaccgat ttaccgtggt	99481
tacggcagtc tgaccattta	ccagtgtatg tctgtaatac	gacgttggtg tgtcccgaca	99541
aaattaactc gcgtacaaat	ttctgatggt cccccggcgt	ggcaacgctg gcattttcaa	99601
acacattacg ttctcgtagc	tccatgaccg ctattttcag	tattaattgg ttggtcggtc	99661
aaagtatttt ccttatgtaa	aaggacacga tctaaagccg	taaactcata cacaaacact	99721
ggtaccaacg gacgcgattt	tccgtccggt gagcgggtgt	aatatcggcg aggtcttctt	99781
gcacgaatac tctcgtagag	taggtttctg acacgggggtg	catgggtttt ttgacacaac	99841
acaaacattt gcaggctctt	atgactggat ggattgaatt	tattttttaga tagggtcacg	99901
tgtttttgtc gtgacacgcc	tcgaccagaa aaggctgcgg	ttttcgtaca cgcgaccggt	99961
atttcacagg cgttcataac	caagctgcgg cggtggtgt	cggttaattg tctccgcca	100021
agttcgtcaa tagatgatac	catgaacaac gtatcaaattg	gtacatagtc gtcttttggt	100081

ttctcaatac agccccgctg cccaatcgga aatttttcat ttgcatcaac gctattttct 100141
 gtaaaatcgt tctgaacact gtgttggctg gctacctgtt taaaatttgg gatcgaacac 100201
 ggtccacgat gcaatcccca accccattga agcaatgccg tcggtacgga aggaggcaac 100261
 tccgaaaaca ttatggtacg caagaggggc gattggagtg ttatataaca ctccaatcga 100321
 tctcgggttc gcctttacgc gtaaaatact cattggcttg aacgaaatgt cgacaattcc 100381
 gaaatggaac acgggacaat ggcgacggat gcgcgtgtgt tagcaccaga tgacatcttg 100441
 aattcgggtg gggtgtcttc tgtgcatgcg caccacacag cataaaaact aaccctgtac 100501
 gggttctcga taacctctgt agcacgcgtt gcaccagccg cccccagcct aagtatacat 100561
 gcgaccccgg agtcccgcga cgaaccgtaa gcgtgggtatt cagcaataac accccctgcc 100621
 ttgcccact ctccaggcat ccgtgagtgg gcggagtcatt atttgggtat gattccatga 100681
 gggccgcaaa aatattttta agactagacg gtggtgttat gccacgtttt acactaaacg 100741
 ctagcccatg tgcattgtccc gcggtagggt atggatcttg accaataatt acaacgcgaa 100801
 tgctctgggg tccgcaaaat cgcgtccatg caaaaatatc gcctgtagat ggaagtattt 100861
 cttcccctga atttaaaaga cgattgtatt ctaaaaaaat acctttcgcg tacggctctt 100921
 taagttcgtc cgacaacagg tcataccact caggggaaat gttaaacttg ctgaaaactt 100981
 caaccgaatc cagttgcgaa gagacggggg tgaacgtttc cgtgtcgtaa tgatgtgaca 101041
 tgttatttaa cttgaagggt ggggggtcta gcttaacccc caaaggcagc ccgcgggggc 101101
 gcttgccggg ttttttggtg accggatggg ccaaaacata aatgtccttt gaatccgata 101161
 gtttcatttc attggcatac gcgttggaac aaacggtcgg ctccccagac acatccattt 101221
 tccgggatat ttgtggaaga tggagtagag tctaccata caccggaaag ggcattccaac 101281
 aaagcatcgc gtatgtcccc gcttttatgt tcttcaccaa cagattgtgc cagccccttt 101341
 aaggtagcgt atggatttgt ccagtacgcc atttgtttgt ctttaaacca aagtataact 101401
 tccggtactg gacattttgt cttaccacg attcccata gcgcctcgct gaggtttgat 101461
 accgggggtg ccgcatagtc ccacgcctca tataccgatg acacgcacgg ttccggtata 101521
 atcaaactca catccgatag cggtttggct ccaaaaaaca acggagtgtc gtcttggaga 101581
 tgaagacaat acgcgattgt gatagttttt aaaaaaacta tctgcagtaa ccatttatgt 101641
 gatgccatga cgcttggtgt ttcccttcac tacgacgttg tcgtatcctt tgaaaaactt 101701
 gaccactcta atggaagcat ggacaagtat gagttttata tatacagttg gccttttagtt 101761
 aaactcttgg tgtcatatct cattttccta aaaagggcga tcttaatatg tcaaacgtca 101821
 cggcgtgccg acaaagcgaa tttccatgca agatttggat gtagtattta tacaccaat 101881

cacatgtcac gtattaagct ttacagtccc ccgttatctg atataatcac ttttcttaac 101941
acgtcatcgg gaaaacagat gtttatatta tacctctcgc ggatcatttac ggcaaatact 102001
tagaccgttt tcaagcggac tgaaaacgct caaattgcct tttggaggcc tgcccaacgg 102061
ccattatccc ttggatctaa gattgatttg cggtaacggt tgccaatcaa gctttaaaaa 102121
cgtaccccaa acttaaaacg ctcaaattgc cttttggagg cctgccaac ggccattatc 102181
ccttggatct gagattgatt tacggtaacg tttgccaac ccacgcattt cagtttaaata 102241
atttctaagc attcttagtg cgtacttggc agcgtgctta aaatatcaac caatatccat 102301
tatgtacac gtttccttct atccgtttca atccattaaa agtccattaa caaaaatgat 102361
gcatcatacc taattcacct aaaaacctga ctcatcgcag cagcgtttcc tccttgcaga 102421
ctatccagtt ggcattttta acgggtccgg ctgcctaaac cgaaaacacc gttgccttta 102481
ctgtaagtac aaaactaaaa tttatatattg cgtgcgtatt ttgtaacata tatgcctttt 102541
atccccccgc aagtttgctt taccctcgcc ttcaccaccc ccgccacctt ccggccattt 102601
taataacttt aattgctata agacataccc aaaccggatg atttttgccg ctggaaaaac 102661
agcttctaata tttcccgctt caactcggcc ttggttgcac ctccaagtat acctttagtt 102721
tgctcccgtg gaggtgtata aatacaaacg gtgacaagta ttgagcgtaa tctcaaattt 102781
ttgtaattta gggcggagcg cttacgacag cacatgcgta ctgttagact gttatgttta 102841
ttgtatttgc agagcaggat gccccggtta ctccgagacc ggattgcggg cattccgaat 102901
cgtgtacgga cttaccaggg ggcagtattt acaccttggg ttccagatat accaaccctt 102961
acgaccaata gcaacactca ggtattttta aaatgcacgt ttaatgatca taatttacat 103021
acagttggta ataaagcaga ctgtggatgt ttaaggcatt tccttcccc tcccaacaaa 103081
ctaggacttc ttcattcttg ttggaatacc tttaccgct ttaccggcag agcttttttt 103141
ggtaagggtg ttcagtgaac ctgatgttga tccggagggt gaggggggtat tggactcccc 103201
ctgtggagag gcaactttgc gggttttact tcccttacat gccgaatcag actcagatgt 103261
caggtctatt gttaagcatc gtttaacgct tctgccggta tgaaataaac ggcgcttagc 103321
accccttgcg cttcccgggt taatccccgg taacacagaa aaaagcctga ctttttgggg 103381
tgtatttacc aatcgggtat ccctttcatc gccacgagag gtctccccgg ttgaggtggt 103441
ttctggtctt acaattggac ctgtaattag ttggatggct gtatctttcc aggtccaggt 103501
ttgcatggtt aggcggggtg gatcggtaca tcgatccaac aagaataaca tgtttggttac 103561
aaacggtcct gttgaatcat gcaaaagaca acgcagggat gtttttaatc ccgcctcatc 103621
acgcccgtaa atacctatat agtttaatat caacattttt gtaggctcta caatttcggg 103681

ttgatacagt tccgcaagtt gatcatcaag ccatccgagt aaagggttgca tgtaacacgg 103741
 gaatctcgcg tttccctctg ttcctctatc cgtgggctcg aaaggcagtc tgtccatggt 103801
 tcgtgggtct tgattaattc ccacagatac tggacgatca cggtagtcct gccccccggt 103861
 ccgggggttg tgtgcagatt caatcgagcc atacaccacc ggggtcgccg atcgaacagc 103921
 aggttggtct ttaaaaaata ccttccgtaa aaatgatgcg gtagagcatg ttttggttac 103981
 accagggctc gagtctcggt tgggtggtg tatagaatcc tgttgagagt cacttggtga 104041
 ctctgctgtg ggctctctag ccgacgattg aaggggcccc gggtttggtg attgaatggg 104101
 ctcccgactc gatcttgatg ttggctggtg gatggactcc cgactcggtc ctgggcttgg 104161
 tggcagaaga tctatgacat ctcccggtag gatgtcgatg gaatcttcaa atgacggctc 104221
 agaaaaacca tcgtcgtcgg atgggtgcac ttcataattc ttgtaacttg taccacttac 104281
 gatcttatgc aggatggatt gcactggaca ccggcagaga ggacactgga cgctgggtga 104341
 ggtccatgcc cgaatacaaa caaagcagaa gtcgtgcaaa cacggcatgg tttttccgag 104401
 atcggaaacg gtgctcatgc atatggtgca ggtattatcc gaagcgtcgg aggtgccgct 104461
 accgcccgtc aatatggtat ccatggtaac aactggctgt attctaattg ccgggcatcc 104521
 aaacacgtag cagaactgcc atgcgttcta aattgtgagt tgtggcgagt acatttttat 104581
 aattggtacc aacgaagaca caccctata tccctccacc catttctttt aagtcccacc 104641
 cactaaaacg tgggtataaa atgtgtattg gggtaggcgg acagtcccaa caaacaggga 104701
 agttgattgg tataaccttg ggccgggtat acagctaagt gacatttttag attctgtctt 104761
 tatttagata aagagcgata cgaagacatt tctccacccc cctgtaatac ccgtaaataa 104821
 aggtaagtcc acaaacaaaa gcactgtata taggaagtcg ggtgtattgg gacagttact 104881
 ccattagagg cgtacaaaca atactgggat agggtaatgc aagtcccccc cgatggctgc 104941
 cccgcaaacg cgcggggagg tggggtcgct tttttttttc tctctcgagg gggccgag 105001
 agggctggcc tctctctccg gggtcgcccg ggcccccaga aaccgggggg gggttatttt 105061
 cggggggggg tccgaccagc ccgcccgtcg ccgcccgcga cagacagaca gacacttttt 105121
 tcataaaaac cgttccgctt ttattaacaa caaacagtcc gcgcgccagt ggcgctcacg 105181
 agaaaaggag gggactccgt ccccccgac tctgcggggg gtcctctccc ccgcgccctc 105241
 cccacacatc gtcctcgtcc tcggaggacg aggacgagga caacagctcc accttgaccg 105301
 ccgggcgcaa acccaccggt cggctctcgca gcacaccggt ggccaccgac acgatgctca 105361
 ccccaaagga tgaccccggt gcgtccccgt cgtccccgcc cccctctctg ctgtcccacg 105421
 cgtcttcaca cccacctcc caatcgcca gtcctaaagc gtgttctctg tcgtctcgcg 105481

tgcgcccgtg tgcccccgcc tgggttttctg acggccggtc cgagcccccg tgggtgtccga 105541
 acacgaaccg tgttccgtcg ctccccctcca acaccgtctc cgcgggcccca aaaccgggcg 105601
 gccacattac tctgggaatc ggggggaggg cattccgagc ctcggtccgcc gacgcataca 105661
 gcgccaccga ccgaccggcc acgggtggaa gcacgagtgg ttctgcggca gggtcggggt 105721
 ccagcagggc gtggcggcaa aacaccctcg ccaggtggg tacgtcgccg gcctccggcc 105781
 cggcggcccc cggtctccgt ccctcgggaa ggaagacggg tcgaagcgcg gcaccagggc 105841
 cccatcgggt tgcgtgcgcg tggctatgtg ccgcctcgtc cacaaagtcg gctgccccga 105901
 gccccagacc ccgagactgt cgcgcgaggt ccttgcaacc gtcaaaacc ggcagcacgt 105961
 actgccggta ttcacggggc gacaggggga cgcgggtctt ggggcccgcg cgggtacaca 106021
 cgggtgtatgc gacgttccca ccgcggcaca aacacagggg ttgttcgccc ggggtacaggt 106081
 tggcaaacgc agtctcgata cgagcaaaac tcgctggccc aaaggtgcgc gacgatgcaa 106141
 acacggcccc ggcgagtcct tctgtgaccg ccgagtctgg ccatcggacg acggcctggg 106201
 cgtccggtcg cgccggggcc cggacgtaca cgtgatactg agacaaagcg ggtccatccc 106261
 tgggccacct ctcgagggcc accgcgtcca acaccagcaa ccggcgcccg gcagaggcca 106321
 accgcgagcc tagatactcg acggcccccg caaaggccag gtctcgggtc gacagtaata 106381
 aaacgccccg ggcgttcaaa gcggacacgt ccggcggggc ggtccagttc ccggcccagg 106441
 catgagtgtc cggcaggcac aaccggttac tcagggtctg caggaccaca gacagtcccc 106501
 ctccgggatg actccatgac ggtcccggat ctgtcgcgag ggtgctctcg agggggccgt 106561
 tgatgtctc tccgggcaac ggatcgtaga tgatcagaag cctcacatcc tccgggtctg 106621
 ggatctgccg catccaggcg cacctccgtc gcagcgcctc cactccgctg ggtggaccaa 106681
 accgtcggtc tctccgccc ggacgccgag cggcgatttc cgccaaggcg ccgggatcaa 106741
 agcttagcgc agggcgccag gccgtgggaa acaatgggtc gtcgaccaga cgggcgatgg 106801
 tttcgggggt acagtacgcc ttgcgagcct ggtccgacgg gaccggggta tgcaggggcc 106861
 cccgggggaat acgccgaaat cccccgtttg gggccgggtcc gtcaagtggc atcgttatta 106921
 cggcgggggg atccaccaca gggcccagag tgatggtcac gggctcggat accgcctct 106981
 tggccttgga aaccacatga tcgtctgcaa ccggggcgtc cgcgacgggt gtctccctaa 107041
 tcttgctgag gaggttctg ctctcgactg gctgggactt gcgcttgcg cgagttcgta 107101
 aacgatcatc cgggtggacac acagaaagag agcgtgcggc ggccgacggc tgagggtcgg 107161
 gagcctgtgt ggccgggggt gttggagaag ggtgaccgcg ggagatccgc gccgccggac 107221
 tggagcccgt tgcctcgggg tatgccatgc tggcaaaggc tctgcggaga ctctgtagga 107281

taaagtgttt ttgggcccgg tcgtatcgac ggctcatagc cacggccgcg gccgcgtggg 107341
 ggagagccca gagggcctcc cccgtggcca tggettegcc tacatgcgga acgggagacg 107401
 ctacgctccc cgtaacggcg gtacccgccc gtcccgggtg caacagcttt tggtagaact 107461
 ggttcagggc cgagttgaca cccgtcagct tggggttctg gagccatgct ataggggtctc 107521
 tgtctggaca gtagatcagg ttaatcagcg cgcgggtactg tctagccgga tctcccaact 107581
 ccggcacgta aagcggcacg gggtccggtg aggccctcgta acgagcccgc gccgctctca 107641
 cagcctcatc ctcccagtga ccctctctgg tctccccgga cgggtccaaac cgcaccctgt 107701
 tggatgggag gggtgccgat ccgggccaag ggcttccgtc gggcatcatg agcggccccg 107761
 acaccggggg aattatcggg gttctggatc gcggcagggg aaatgatttc tgtctctggc 107821
 gccccgggtc ccccgcaaga cgtttgggtc tacgaatcct cggatcggga ccgctgatgg 107881
 atcgatatcc cggttggata ttttgtttcg tcgaccacc atcatttgag tccgaatcat 107941
 ccgaatttga cggggaaggg gcgtgttcgc gtccggacct gctgcctgta gtttcacttc 108001
 ccaccgaaac gcgccggggg tcatcgtctt catcctccga tgacgatccc cacgacgagg 108061
 aagaggatga agacgaaaca aactcacgac tctttggctt tttctccact gggctgtcat 108121
 cctcaatcgg gtctgggtgc tgggatcttc ccggcagggc caaaaacgct ctaggtttgc 108181
 cccccgacga acgtccaggg acgcgaggtg ttataccccg ggcacatgtt ttccttgggc 108241
 gggatatcatc ggtctcaaac ggcaggtccg cctttgcccc cttagcggga acgctgtccg 108301
 aaaggacgtg gtacaattgc tcaaccgggc cgggtacagg tccaccgggt ttccgcgccg 108361
 ggagtgggac cttaaccttc aaagtctttt tcttcgggct ctttccctga gcgggcccgtt 108421
 gagttttctg gagaactact ccgtcccccg atgcatgcgc atgaccgcgt tgctcatcgc 108481
 ccggcttttt acccgagatg gactgagttt gtctgtctcg atggaccacc gacggcaaac 108541
 ctggtgaatt tcctctcgtc gtttgtcggg gtatagaccg ctggtcttcc cgttgatcgt 108601
 tcccggcggc gtctccaaca ggagacgcgg gggatacagg ggagaaggcc tgcgggaacg 108661
 gaggggtcgt acctctgccc gtttccccat cgttcatcgg tggttttgga gacctagcaa 108721
 gcttcgttcc gagagagact gtctcaaggg agcgatcggc tcctgttggt tctcgcgcgc 108781
 cggcctccga gaatcgggtg tggaagacct cggccagcgg gattacaggc gagccatta 108841
 gatcctgacc gtccctcgcat acgtagtcgt cttgtgttag ctcttcgcca acatcttccg 108901
 ttctgggttc tggttgaagt cccgatacgg aggggaattga aacgatctcg tgttcccgtc 108961
 ccaccatgac cccgttctct ccaaatagta gatcgtcagg ctgactcgag gtgaccaccc 109021
 gggccctgtg ttcggcggcc gccgcggccg cgtccaacag gtccattaac tccaaagtat 109081

caggcgaccc cgcgcggttg ggtgtagagc gctgcatcgg cggcgatatcc atcgcaactgg 109141
ggtgaattta gacgtacccg agtttttccaa acgctctcgc agccttcaaa ggattgcgat 109201
tgcgggttggg gagggagttc caacagtact taaaacgtgt tgtgcccccc cctcgaccgc 109261
atattttctc cccgtgtcgt caccgtgtaa atattcttaa tgataagacg atgtagtgat 109321
tggacgagac tcgaggcggg aagttcatgg accatagtat gcgtttaagg agagaccgct 109381
ggttggcgat gtacgcccgg tgtctatttc cgcatacctt acaacatcat aacaagggat 109441
accagacatg tgaatttcat ttacatatgt ttaaataaca accaatcatc gtgtgtctac 109501
agacgatata taatatacat aaacacaatt ggggttgtct cacatgcaaa acatcttata 109561
taacacgggt tgtttccacc catccggcat ctagttaatc aaatgcacgt cgacgggtgtg 109621
tttgggtccc tctccgtcgt cattacgttc gcgcaatcaa caagcgata caccaccacc 109681
cctcccaacg attatgtcag gcggcacgaa gcccgcgata acccataaaa tacacacggg 109741
gttgtggtgt tcacgtaacc ccccgccgat ggggaggggg cgcggtaccc cgccgatggg 109801
gagggggcgc ggtaccccg ccatggggag ggggcgcggt accccgccga tggggagggg 109861
gcgcggtacc ccgccgatgg ggagggggcg cggtagcccg ccgatgttta taaccataat 109921
tctctaaacc gttgtagaaa atcacaaaaa aatttattca aaaacaagtc gaagaacttc 109981
atatctgagg catgtaaacc cgttcgcact tcctgggggtg gaatgggggtg ggggtgggggg 110041
gtgaaaaagg ggggggggta aattgggcgt ccgcatgtct gtggtgtacg ccaatcggat 110101
acactctttt gatctgcatt cgcacttccc gttttttcac tgtatgggtt ttcattgtttt 110161
ggcatgtgtc caaccaccgt tcgcactttc tttctatata tatatatata tatatatata 110221
tatatagaga aagagagaga gtttcttggt cgcgcggtgt cccgcgatgt cgcggtttta 110281
tgggggtgtg gcgggctttt cacagaatat atatattcca aatggagcgg caggcttttt 110341
aaaatcgatt tgacgtgata aaaaaaaca cacggggccc cccctttttt ttggtgttat 110401
aaaggcaacc caatcgaagg tctcccgccc cggaatcccc cattgccatt ttaccaagt 110461
agccttattc atagatgtaa acgtttgggt gtgtgttttg ttgtgcaggg ttcgtccgat 110521
tcataacgcg acagcgtcga gtcggtttta agggaaaagg ttactacggc cccaaggac 110580

atg ttt tgc acc tca ccg gct acg cgg ggc gac tcg tcc gag tca 110625
Met Phe Cys Thr Ser Pro Ala Thr Arg Gly Asp Ser Ser Glu Ser
18315 18320 18325

aaa ccc ggg gca tcg gtt gat gtt aac gga aag atg gaa tat gga 110670
Lys Pro Gly Ala Ser Val Asp Val Asn Gly Lys Met Glu Tyr Gly
18330 18335 18340

tct gca cca gga ccc ctg aac ggc cgg gat acg tcg cgg ggc ccc 110715
Ser Ala Pro Gly Pro Leu Asn Gly Arg Asp Thr Ser Arg Gly Pro

18345		18350		18355	
ggc gcg ttt tgt act ccg ggt tgg gag atc cac ccg gcc agg ctc 110760		Gly Ala Phe Cys Thr Pro Gly Trp Glu Ile His Pro Ala Arg Leu		18370	
18360		18365			
gtt gag gac atc aac cgt gtt ttt tta tgt att gca cag tcg tcg 110805		Val Glu Asp Ile Asn Arg Val Phe Leu Cys Ile Ala Gln Ser Ser		18385	
18375		18380			
gga cgc gtc acg cga gat tca cga aga ttg cgg cgc ata tgc ctc 110850		Gly Arg Val Thr Arg Asp Ser Arg Arg Leu Arg Arg Ile Cys Leu		18400	
18390		18395			
gac ttt tat cta atg ggt cgc acc aga cag cgt ccc acg tta gcg 110895		Asp Phe Tyr Leu Met Gly Arg Thr Arg Gln Arg Pro Thr Leu Ala		18415	
18405		18410			
tgc tgg gag gaa ttg tta cag ctt caa ccc acc cag acg cag tgc 110940		Cys Trp Glu Glu Leu Leu Gln Leu Gln Pro Thr Gln Thr Gln Cys		18430	
18420		18425			
tta cgc gct act tta atg gaa gtg tcc cat cga ccc cct cgg ggg 110985		Leu Arg Ala Thr Leu Met Glu Val Ser His Arg Pro Pro Arg Gly		18445	
18435		18440			
gaa gac ggg ttc att gag gcg ccg aat gtt cct ttg cat agg agc 111030		Glu Asp Gly Phe Ile Glu Ala Pro Asn Val Pro Leu His Arg Ser		18460	
18450		18455			
gca ctg gaa tgt gac gta tct gat gat ggt ggt gaa gac gat agc 111075		Ala Leu Glu Cys Asp Val Ser Asp Asp Gly Gly Glu Asp Asp Ser		18475	
18465		18470			
gac gat gat ggg tct acg cca tcg gat gta att gaa ttt cgg gat 111120		Asp Asp Asp Gly Ser Thr Pro Ser Asp Val Ile Glu Phe Arg Asp		18490	
18480		18485			
tcc gac gcg gaa tca tcg gac ggg gaa gac ttt ata gtg gaa gaa 111165		Ser Asp Ala Glu Ser Ser Asp Gly Glu Asp Phe Ile Val Glu Glu		18505	
18495		18500			
gaa tca gag gag agc acc gat tct tgt gaa cca gac ggg gta ccc 111210		Glu Ser Glu Glu Ser Thr Asp Ser Cys Glu Pro Asp Gly Val Pro		18520	
18510		18515			
ggc gat tgt tat cga gac ggg gat ggg tgc aac acc ccg tcc cca 111255		Gly Asp Cys Tyr Arg Asp Gly Asp Gly Cys Asn Thr Pro Ser Pro		18535	
18525		18530			
aag aga ccc cag cgt gcc atc gag cga tac gcg ggt gca gaa acc 111300		Lys Arg Pro Gln Arg Ala Ile Glu Arg Tyr Ala Gly Ala Glu Thr		18550	
18540		18545			
gcg gaa tat aca gcc gcg aaa gcg ctc acc gcg ttg ggc gag ggg 111345		Ala Glu Tyr Thr Ala Ala Lys Ala Leu Thr Ala Leu Gly Glu Gly		18565	
18555		18560			
ggt gta gat tgg aag cga cgt cga cac gaa gcc ccg cgc cgg cat 111390		Gly Val Asp Trp Lys Arg Arg Arg His Glu Ala Pro Arg Arg His			

18570		18575		18580	
gat ata ccg ccc ccc cat ggc	gtg tag tctttataaa taaatacaat	111437			
Asp Ile Pro Pro Pro His Gly	Val				
18585	18590				
ggtttggctc gtgtcttttt ttgatgtctg tctgtggggg agtgggggtgt tgtggatatt 111497					
agagggtaga ggggtgctggt ttgaacgtct ccattaaccc acgggggtccc cacacggggcc 111557					
gtgtggt atg aat ctc tgc	gga tcc cgc ggt gag	cac ccg ggc ggt	111603		
Met Asn Leu Cys	Gly Ser Arg Gly Glu	His Pro Gly Gly			
18595	18600				
gaa tat gcc gga ctt tac	tgc aca cga cac gat	acc ccc gcg cac	111648		
Glu Tyr Ala Gly Leu Tyr	Cys Thr Arg His Asp	Thr Pro Ala His			
18605	18610	18615			
cag gct ctc atg aac gac	gcc gaa cgg tac ttc	gcc gcc gcg cta	111693		
Gln Ala Leu Met Asn Asp	Ala Glu Arg Tyr Phe	Ala Ala Ala Leu			
18620	18625	18630			
tgc gcc ata tct acc gag	gcc tac gag gct ttt	ata cac agc ccc	111738		
Cys Ala Ile Ser Thr Glu	Ala Tyr Glu Ala Phe	Ile His Ser Pro			
18635	18640	18645			
tcc gag aga ccg tgc gcg	agt ttg tgg ggg agg	gca aag gac gcc	111783		
Ser Glu Arg Pro Cys Ala	Ser Leu Trp Gly Arg	Ala Lys Asp Ala			
18650	18655	18660			
ttc gga cgg atg tgc ggg	gag ctc gca gcg gat	aga caa cgt cca	111828		
Phe Gly Arg Met Cys Gly	Glu Leu Ala Ala Asp	Arg Gln Arg Pro			
18665	18670	18675			
ccc tcg gtt ccg ccg atc	cgc aga gcg gtg tta	tcg tta tta cgc	111873		
Pro Ser Val Pro Pro Ile	Arg Arg Ala Val Leu	Ser Leu Leu Arg			
18680	18685	18690			
gag caa tgc atg ccg gat	cca caa tcg cat ctg	gag ctc agc gag	111918		
Glu Gln Cys Met Pro Asp	Pro Gln Ser His Leu	Glu Leu Ser Glu			
18695	18700	18705			
cgg ctg ata ttg atg gca	tat tgg tgc tgt ttg	gga cac gcc gga	111963		
Arg Leu Ile Leu Met Ala	Tyr Trp Cys Cys Leu	Gly His Ala Gly			
18710	18715	18720			
ctt ccg act att gga ttg	tcg ccc gat aat aaa	tgc atc cgc gcc	112008		
Leu Pro Thr Ile Gly Leu	Ser Pro Asp Asn Lys	Cys Ile Arg Ala			
18725	18730	18735			
gaa tta tat gac cgc ccc	ggg gga att tgt cac	agg ctt ttt gac	112053		
Glu Leu Tyr Asp Arg Pro	Gly Gly Ile Cys His	Arg Leu Phe Asp			
18740	18745	18750			
gcg tac ctg ggc tgc ggg	tcc ctt gga gtc cca	aga acc tac gag	112098		
Ala Tyr Leu Gly Cys Gly	Ser Leu Gly Val Pro	Arg Thr Tyr Glu			
18755	18760	18765			
aga tcc tga caccatcc ctttatatag	aaaaaaaaa taaatttaaa	112147			
Arg Ser					

18770

acatacaccg gataaaagcg tactgttttt tatttaaatt tacacgctcg gcgttgcccc 112207
 gggtcggtga tcaccggggtc ttatctatat acaccgtgta actcgaaccc ccgtgactcc 112267
 ctccaatcgc gttaccaaac tcttcttccg tatccgtaga ttccgagtc tcgaaatcgt 112327
 ccacttatcc aacaaattgt gacgttatat atcccaaggc aaaggccgct cccgtcatag 112387
 caaatacaaa gacaattatt agcgtaatat aacagaattt tttacgatga tatattttat 112447
 gttgatattt tccaattcga cgcaaaaatt catctgccgt ttcattttcg ctatcactat 112507
 aataacactt ttcagccgaa cggctcgggt gtatggctgt tatcgttgta ttatttggtt 112567
 gcgctcgcg gggttaccacc gcttccatca gtaaggccac ggcctcacc tccatgggtgt 112627
 tttgtccggc catagaaatc cagattgtaa ggccagcagg ctagtttaaa agtgtttaat 112687
 accacacctt ttgatattta tatacatgca agattctaga ttattcatca ataggtcgtt 112747
 taaagcgcg tttcataaac gttgtcagct ataccgacat tctcaciaag aggtaaagt 112807
 accttacgtt attattaaat aaaacatgta gacattatta ataatcctag gaacaatcaa 112867
 atccatattt gtaagttatg ttttaaccct cccctttttg tcattatctc cgccctctta 112927
 taatcggatc actttataag tgtgtcgggt agtatatttt gtacagttgt tggacaacag 112987
 gtttttggtt cattaacact atcaacataa gtcgggggtat acaagtata atg aac gac 113045
 Met Asn Asp

gtt	gat	gca	aca	gac	acc	ttt	gtt	gga	caa	gga	aag	ttc	cgt	ggc	113090
Val	Asp	Ala	Thr	Asp	Thr	Phe	Val	Gly	Gln	Gly	Lys	Phe	Arg	Gly	
18775					18780					18785					

gcc	atc	tca	aca	tca	ccg	tca	cat	att	atg	caa	aca	tgt	ggg	ttt	113135
Ala	Ile	Ser	Thr	Ser	Pro	Ser	His	Ile	Met	Gln	Thr	Cys	Gly	Phe	
18790					18795					18800					

ata	caa	cag	atg	ttt	cca	gtt	gaa	atg	tcg	ccc	ggc	ata	gaa	tct	113180
Ile	Gln	Gln	Met	Phe	Pro	Val	Glu	Met	Ser	Pro	Gly	Ile	Glu	Ser	
18805					18810					18815					

gag	gat	gat	ccc	aat	tat	gac	gtt	aac	atg	gat	ata	cag	tct	ttt	113225
Glu	Asp	Asp	Pro	Asn	Tyr	Asp	Val	Asn	Met	Asp	Ile	Gln	Ser	Phe	
18820					18825					18830					

aat	ata	ttt	gat	ggt	gta	cac	gaa	act	gaa	gcc	gaa	gcc	tct	gtg	113270
Asn	Ile	Phe	Asp	Gly	Val	His	Glu	Thr	Glu	Ala	Glu	Ala	Ser	Val	
18835					18840					18845					

gca	ttg	tgc	gca	gaa	gca	cgc	gtt	gga	att	aat	aaa	gcg	gga	ttt	113315
Ala	Leu	Cys	Ala	Glu	Ala	Arg	Val	Gly	Ile	Asn	Lys	Ala	Gly	Phe	
18850					18855					18860					

gta	ata	tta	aaa	acg	ttt	aca	cca	ggg	gcg	gaa	ggt	ttt	gcg	ttt	113360
Val	Ile	Leu	Lys	Thr	Phe	Thr	Pro	Gly	Ala	Glu	Gly	Phe	Ala	Phe	

18865		18870		18875	
gcg	tgt atg gac agt aaa	aca tgt gaa cat gtg	gtc att aaa gcg	113405	
Ala	Cys Met Asp Ser Lys	Thr Cys Glu His Val	Val Ile Lys Ala		
18880		18885		18890	
ggt	caa cgt caa gga acg	gcc acc gag gca acc	gtg tta aga gcg	113450	
Gly	Gln Arg Gln Gly Thr	Ala Thr Glu Ala Thr	Val Leu Arg Ala		
18895		18900		18905	
tta	acc cac cca tcc gtt	gta cag ctt aaa gga	acg ttt acg tat	113495	
Leu	Thr His Pro Ser Val	Val Gln Leu Lys Gly	Thr Phe Thr Tyr		
18910		18915		18920	
aac	aaa atg aca tgt ctt	ata tta cca cgt tac	cga aca gat tta	113540	
Asn	Lys Met Thr Cys Leu	Ile Leu Pro Arg Tyr	Arg Thr Asp Leu		
18925		18930		18935	
tac	tgc tat cta gct gca	aag cgc aac ctc ccc	ata tgt gac att	113585	
Tyr	Cys Tyr Leu Ala Ala	Lys Arg Asn Leu Pro	Ile Cys Asp Ile		
18940		18945		18950	
tta	gca att cag cga tct	gta tta cgc gcg tta	cag tat ctt cat	113630	
Leu	Ala Ile Gln Arg Ser	Val Leu Arg Ala Leu	Gln Tyr Leu His		
18955		18960		18965	
aat	aac agt att att cac	cgt gat ata aaa tct	gaa aat ata ttt	113675	
Asn	Asn Ser Ile Ile His	Arg Asp Ile Lys Ser	Glu Asn Ile Phe		
18970		18975		18980	
att	aac cac cca ggt gat	gtt tgt gtg gga gac	ttt gga gca gcg	113720	
Ile	Asn His Pro Gly Asp	Val Cys Val Gly Asp	Phe Gly Ala Ala		
18985		18990		18995	
tgt	ttc ccc gtg gat att	aat gcc aac agg tat	tat ggc tgg gct	113765	
Cys	Phe Pro Val Asp Ile	Asn Ala Asn Arg Tyr	Tyr Gly Trp Ala		
19000		19005		19010	
gga	aca atc gcc aca aac	tct cct gag tta ttg	gct aga gat cca	113810	
Gly	Thr Ile Ala Thr Asn	Ser Pro Glu Leu Leu	Ala Arg Asp Pro		
19015		19020		19025	
tat	gga cct gcc gtg gac	ata tgg agt gcc ggg	att gta tta ttt	113855	
Tyr	Gly Pro Ala Val Asp	Ile Trp Ser Ala Gly	Ile Val Leu Phe		
19030		19035		19040	
gaa	atg gct aca gga cag	aac tcg tta ttt gaa	cga gac ggt tta	113900	
Glu	Met Ala Thr Gly Gln	Asn Ser Leu Phe Glu	Arg Asp Gly Leu		
19045		19050		19055	
gat	ggc aat tgt gac agt	gag cgt caa att aaa	ctt att ata cga	113945	
Asp	Gly Asn Cys Asp Ser	Glu Arg Gln Ile Lys	Leu Ile Ile Arg		
19060		19065		19070	
cga	tct gga act cat ccc	aat gaa ttt ccc att	aac cct aca tca	113990	
Arg	Ser Gly Thr His Pro	Asn Glu Phe Pro Ile	Asn Pro Thr Ser		
19075		19080		19085	
aat	ctt cgt cga caa tac	att ggt ttg gca aaa	cgg tct tct cga	114035	
Asn	Leu Arg Arg Gln Tyr	Ile Gly Leu Ala Lys	Arg Ser Ser Arg		

19090		19095		19100	
aaa ccc gga tcc agg cca	ttg tgg aca aat cta	tat gag ttg cca	114080		
Lys Pro Gly Ser Arg Pro	Leu Trp Thr Asn Leu	Tyr Glu Leu Pro			
19105	19110	19115			
att gat ttg gag tat ttg	ata tgt aag atg tta	tcg ttt gac gca	114125		
Ile Asp Leu Glu Tyr Leu	Ile Cys Lys Met Leu	Ser Phe Asp Ala			
19120	19125	19130			
cgt cat cga cca tca gca	gag gtg ttg ctt aac	cac tct gtt ttc	114170		
Arg His Arg Pro Ser Ala	Glu Val Leu Leu Asn	His Ser Val Phe			
19135	19140	19145			
caa act ctt ccc gat cca	tat cca aat cca atg	gaa gtt gga gat	114215		
Gln Thr Leu Pro Asp Pro	Tyr Pro Asn Pro Met	Glu Val Gly Asp			
19150	19155	19160			
taa aattcattaa gcctgttaat aaaatattgt ataaattgtg tttataacgt				114268	
ataacccggt aaggcaaata gggtaacaac gcgcaatggt ttgaaatact aatataaata				114328	
acataaccaa tagaaactta atacagagtc acgccccatt acaacaagga taaaacacgg				114388	
gatcatttttc ttaacattgt agtagcgctg aaaagcgctc cctcccccggt ctcacagagc				114448	
tgctcttcgg tgtagttggg tatactgggtg cgcctcattt aatcgcg atg				114504	
				Met Phe Leu	
				19165	
atc caa tgt	ttg ata tcg gcc gtt	ata ttt tac ata caa	gtg acc	114549	
Ile Gln Cys	Leu Ile Ser Ala Val	Ile Phe Tyr Ile Gln	Val Thr		
19170	19175	19180			
aac gct ttg	atc ttc aag ggc gac	cac gtg agc ttg caa	gtt aac	114594	
Asn Ala Leu	Ile Phe Lys Gly Asp	His Val Ser Leu Gln	Val Asn		
19185	19190	19195			
agc agt ctc	acg tct atc ctt att	ccc atg caa aat gat	aat tat	114639	
Ser Ser Leu	Thr Ser Ile Leu Ile	Pro Met Gln Asn Asp	Asn Tyr		
19200	19205	19210			
aca gag ata	aaa gga cag ctt gtc	ttt att gga gag caa	cta cct	114684	
Thr Glu Ile	Lys Gly Gln Leu Val	Phe Ile Gly Glu Gln	Leu Pro		
19215	19220	19225			
acc ggg aca	aac tat agc gga aca	ctg gaa ctg tta tac	gcg gat	114729	
Thr Gly Thr	Asn Tyr Ser Gly Thr	Leu Glu Leu Leu Tyr	Ala Asp		
19230	19235	19240			
acg gtg gcg	ttt tgt ttc cgg tca	gta caa gta ata aga	tac gac	114774	
Thr Val Ala	Phe Cys Phe Arg Ser	Val Gln Val Ile Arg	Tyr Asp		
19245	19250	19255			
gga tgt ccc	cgg att aga acg agc	gct ttt att tcg tgt	agg tac	114819	
Gly Cys Pro	Arg Ile Arg Thr Ser	Ala Phe Ile Ser Cys	Arg Tyr		
19260	19265	19270			
aaa cat tcg	tgg cat tat ggt aac	tca acg gat cgg ata	tca aca	114864	
Lys His Ser	Trp His Tyr Gly Asn	Ser Thr Asp Arg Ile	Ser Thr		

19275			19280			19285		
gag ccg gat	gct ggt gta atg ttg	aaa att acc aaa ccg	gga ata	114909				
Glu Pro Asp	Ala Gly Val Met Leu	Lys Ile Thr Lys Pro	Gly Ile					
19290	19295	19300						
aat gat gct	ggt gtg tat gta ctt	ctt gtt cgg tta gac	cat agc	114954				
Asn Asp Ala	Gly Val Tyr Val Leu	Leu Val Arg Leu Asp	His Ser					
19305	19310	19315						
aga tcc acc	gat ggt ttc att ctt	ggt gta aat gta tat	aca gcg	114999				
Arg Ser Thr	Asp Gly Phe Ile Leu	Gly Val Asn Val Tyr	Thr Ala					
19320	19325	19330						
ggc tcg cat	cac aac att cac ggg	gtt atc tac act tct	ccg tct	115044				
Gly Ser His	His Asn Ile His Gly	Val Ile Tyr Thr Ser	Pro Ser					
19335	19340	19345						
cta cag aat	gga tat tct aca aga	gcc ctt ttt caa caa	gct cgt	115089				
Leu Gln Asn	Gly Tyr Ser Thr Arg	Ala Leu Phe Gln Gln	Ala Arg					
19350	19355	19360						
ttg tgt gat	tta ccc gcg aca ccc	aaa ggg tcc ggt acc	tcc ctg	115134				
Leu Cys Asp	Leu Pro Ala Thr Pro	Lys Gly Ser Gly Thr	Ser Leu					
19365	19370	19375						
ttt caa cat	atg ctt gat ctt cgt	gcc ggt aaa tcg tta	gag gat	115179				
Phe Gln His	Met Leu Asp Leu Arg	Ala Gly Lys Ser Leu	Glu Asp					
19380	19385	19390						
aac cct tgg	tta cat gag gac gtt	gtt acg aca gaa act	aag tcc	115224				
Asn Pro Trp	Leu His Glu Asp Val	Val Thr Thr Glu Thr	Lys Ser					
19395	19400	19405						
gtt gtt aag	gag ggg ata gaa aat	cac gta tat cca acg	gat atg	115269				
Val Val Lys	Glu Gly Ile Glu Asn	His Val Tyr Pro Thr	Asp Met					
19410	19415	19420						
tcc acg tta	ccc gaa aag tcc ctt	aat gat cct cca gaa	aat cta	115314				
Ser Thr Leu	Pro Glu Lys Ser Leu	Asn Asp Pro Pro Glu	Asn Leu					
19425	19430	19435						
ctt ata att	att cct ata gta gcg	tct gtc atg atc ctc	acc gcc	115359				
Leu Ile Ile	Ile Pro Ile Val Ala	Ser Val Met Ile Leu	Thr Ala					
19440	19445	19450						
atg gtt att	gtt att gta ata agc	gtt aag cga cgt aga	att aaa	115404				
Met Val Ile	Val Ile Val Ile Ser	Val Lys Arg Arg Arg	Ile Lys					
19455	19460	19465						
aaa cat cca	att tat cgc cca aat	aca aaa aca aga agg	ggc ata	115449				
Lys His Pro	Ile Tyr Arg Pro Asn	Thr Lys Thr Arg Arg	Gly Ile					
19470	19475	19480						
caa aat gcg	aca cca gaa tcc gat	gtg atg ttg gag gcc	gcc att	115494				
Gln Asn Ala	Thr Pro Glu Ser Asp	Val Met Leu Glu Ala	Ala Ile					
19485	19490	19495						
gca caa cta	gca acg att cgc gaa	gaa tcc ccc cca cat	tcc gtt	115539				
Ala Gln Leu	Ala Thr Ile Arg Glu	Glu Ser Pro Pro His	Ser Val					

19500	19505	19510	
gta aac ccg ttt gtt aaa tag aactaattat cccggatttt atattaaata			115590
Val Asn Pro Phe Val Lys			
19515			
aactatatgc gttttattta gcgttttgat tacgcgttgt gatatgaggg gaaggattaa			115650
gaatctccta actataagtt aacacgccc catttgggcg gggatgtttt atgaagcctt			115710
aaaggccgag ctggtataca cgagagcagt ccatggtttt agacctcggg cgaattgcgt			115770
ggttttaagt gactatattc cgagggtcgc ctgtaat atg ggg aca gtt aat			115822
		Met Gly Thr Val Asn	
		19520	
aaa cct gtg gtg ggg gta ttg atg ggg ttc gga att atc acg gga			115867
Lys Pro Val Val Gly Val Leu Met Gly Phe Gly Ile Ile Thr Gly			
19525	19530	19535	
acg ttg cgt ata acg aat ccg gtc aga gca tcc gtc ttg cga tac			115912
Thr Leu Arg Ile Thr Asn Pro Val Arg Ala Ser Val Leu Arg Tyr			
19540	19545	19550	
gat gat ttt cac acc gat gaa gac aaa ctg gat aca aac tcc gta			115957
Asp Asp Phe His Thr Asp Glu Asp Lys Leu Asp Thr Asn Ser Val			
19555	19560	19565	
tat gag cct tac tac cat tca gat cat gcg gag tct tca tgg gta			116002
Tyr Glu Pro Tyr Tyr His Ser Asp His Ala Glu Ser Ser Trp Val			
19570	19575	19580	
aat cgg gga gag tct tcg cga aaa gcg tac gat cat aac tca cct			116047
Asn Arg Gly Glu Ser Ser Arg Lys Ala Tyr Asp His Asn Ser Pro			
19585	19590	19595	
tat ata tgg cca cgt aat gat tat gat gga ttt tta gag aac gca			116092
Tyr Ile Trp Pro Arg Asn Asp Tyr Asp Gly Phe Leu Glu Asn Ala			
19600	19605	19610	
cac gaa cac cat ggg gtg tat aat cag ggc cgt ggt atc gat agc			116137
His Glu His His Gly Val Tyr Asn Gln Gly Arg Gly Ile Asp Ser			
19615	19620	19625	
ggg gaa cgg tta atg caa ccc aca caa atg tct gca cag gag gat			116182
Gly Glu Arg Leu Met Gln Pro Thr Gln Met Ser Ala Gln Glu Asp			
19630	19635	19640	
ctt ggg gac gat acg ggc atc cac gtt atc cct acg tta aac ggc			116227
Leu Gly Asp Asp Thr Gly Ile His Val Ile Pro Thr Leu Asn Gly			
19645	19650	19655	
gat gac aga cat aaa att gta aat gtg gac caa cgt caa tac ggt			116272
Asp Asp Arg His Lys Ile Val Asn Val Asp Gln Arg Gln Tyr Gly			
19660	19665	19670	
gac gtg ttt aaa gga gat ctt aat cca aaa ccc caa ggc caa aga			116317
Asp Val Phe Lys Gly Asp Leu Asn Pro Lys Pro Gln Gly Gln Arg			
19675	19680	19685	

ctc att gag gtg tca gtg gaa Leu Ile Glu Val Ser Val Glu 19690	gaa aat cac ccg ttt Glu Asn His Pro Phe 19695	act tta cgc Thr Leu Arg 19700	116362
gca ccg att cag cgg att tat Ala Pro Ile Gln Arg Ile Tyr 19705	gga gtc cgg tac acc Gly Val Arg Tyr Thr 19710	gag act tgg Glu Thr Trp 19715	116407
agc ttt ttg ccg tca tta acc Ser Phe Leu Pro Ser Leu Thr 19720	tgt acg gga gac gca Cys Thr Gly Asp Ala 19725	gcg ccc gcc Ala Pro Ala 19730	116452
atc cag cat ata tgt tta aaa Ile Gln His Ile Cys Leu Lys 19735	cat aca aca tgc ttt His Thr Thr Cys Phe 19740	caa gac gtg Gln Asp Val 19745	116497
gtg gtg gat gtg gat tgc gcg Val Val Asp Val Asp Cys Ala 19750	gaa aat act aaa gag Glu Asn Thr Lys Glu 19755	gat cag ttg Asp Gln Leu 19760	116542
gcc gaa atc agt tac cgt ttt Ala Glu Ile Ser Tyr Arg Phe 19765	caa ggt aag aag gaa Gln Gly Lys Lys Glu 19770	gag gac caa Ala Asp Gln 19775	116587
ccg tgg att gtt gta aac acg Pro Trp Ile Val Val Asn Thr 19780	agc aca ctg ttt gat Ser Thr Leu Phe Asp 19785	gaa ctc gaa Glu Leu Glu 19790	116632
tta gac ccc ccc gag att gaa Leu Asp Pro Pro Glu Ile Glu 19795	ccg ggt gtc ttg aaa Pro Gly Val Leu Lys 19800	gta ctt cgg Val Leu Arg 19805	116677
aca gaa aaa caa tac ttg ggt Thr Glu Lys Gln Tyr Leu Gly 19810	gtg tac att tgg aac Val Tyr Ile Trp Asn 19815	atg cgc ggc Met Arg Gly 19820	116722
tcc gat ggt acg tct acc tac Ser Asp Gly Thr Ser Thr Tyr 19825	gcc acg ttt ttg gtc Ala Thr Phe Leu Val 19830	acc tgg aaa Thr Trp Lys 19835	116767
ggg gat gaa aaa aca aga aac Gly Asp Glu Lys Thr Arg Asn 19840	cct acg ccc gca gta Pro Thr Pro Ala Val 19845	act cct caa Thr Pro Gln 19850	116812
cca aga ggg gct gag ttt cat Pro Arg Gly Ala Glu Phe His 19855	atg tgg aat tac cac Met Trp Asn Tyr His 19860	tcg cat gta Ser His Val 19865	116857
ttt tca gtt ggt gat acg ttt Phe Ser Val Gly Asp Thr Phe 19870	agc ttg gca atg cat Ser Leu Ala Met His 19875	ctt cag tat Leu Gln Tyr 19880	116902
aag ata cat gaa gcg cca ttt Lys Ile His Glu Ala Pro Phe 19885	gat ttg ctg tta gag Asp Leu Leu Leu Glu 19890	tgg ttg tat Trp Leu Tyr 19895	116947
gtc ccc atc gat cct aca tgt Val Pro Ile Asp Pro Thr Cys 19900	caa cca atg cgg tta Gln Pro Met Arg Leu 19905	tat tct acg Tyr Ser Thr 19910	116992

tgt ttg	tat cat	ccc aac	gca	ccc caa	tgc ctc	tct	cat atg	aat	117037
Cys Leu	Tyr His	Pro Asn	Ala	Pro Gln	Cys Leu	Ser	His Met	Asn	
19915			19920			19925			
tcc ggt	tgt aca	ttt acc	tcg	cca cat	tta gcc	cag	cgt gtt	gca	117082
Ser Gly	Cys Thr	Phe Thr	Ser	Pro His	Leu Ala	Gln	Arg Val	Ala	
19930			19935			19940			
agc aca	gtg tat	caa aat	tgt	gaa cat	gca gat	aac	tac acc	gca	117127
Ser Thr	Val Tyr	Gln Asn	Cys	Glu His	Ala Asp	Asn	Tyr Thr	Ala	
19945			19950			19955			
tat tgt	ctg gga	ata tct	cat	atg gag	cct agc	ttt	ggt cta	atc	117172
Tyr Cys	Leu Gly	Ile Ser	His	Met Glu	Pro Ser	Phe	Gly Leu	Ile	
19960			19965			19970			
tta cac	gac ggg	ggc acc	acg	tta aag	ttt gta	gat	aca ccc	gag	117217
Leu His	Asp Gly	Gly Thr	Thr	Leu Lys	Phe Val	Asp	Thr Pro	Glu	
19975			19980			19985			
agt ttg	tcg gga	tta tac	gtt	ttt gtg	gtg tat	ttt	aac ggg	cat	117262
Ser Leu	Ser Gly	Leu Tyr	Val	Phe Val	Val Tyr	Phe	Asn Gly	His	
19990			19995			20000			
gtt gaa	gcc gta	gca tac	act	gtt gta	tcc aca	gta	gat cat	ttt	117307
Val Glu	Ala Val	Ala Tyr	Thr	Val Val	Ser Thr	Val	Asp His	Phe	
20005			20010			20015			
gta aac	gca att	gaa gag	cgt	gga ttt	ccg cca	acg	gcc ggt	cag	117352
Val Asn	Ala Ile	Glu Glu	Arg	Gly Phe	Pro Pro	Thr	Ala Gly	Gln	
20020			20025			20030			
cca ccg	gcg act	act aaa	ccc	aag gaa	att acc	ccc	gta aac	ccc	117397
Pro Pro	Ala Thr	Thr Lys	Pro	Lys Glu	Ile Thr	Pro	Val Asn	Pro	
20035			20040			20045			
gga acg	tca cca	ctt cta	cga	tat gcc	gca tgg	acc	gga ggg	ctt	117442
Gly Thr	Ser Pro	Leu Leu	Arg	Tyr Ala	Ala Trp	Thr	Gly Gly	Leu	
20050			20055			20060			
gca gca	gta gta	ctt tta	tgt	ctc gta	ata ttt	tta	atc tgt	acg	117487
Ala Ala	Val Val	Leu Leu	Cys	Leu Val	Ile Phe	Leu	Ile Cys	Thr	
20065			20070			20075			
gct aaa	cga atg	agg gtt	aaa	gcc tat	agg gta	gac	aag tcc	ccg	117532
Ala Lys	Arg Met	Arg Val	Lys	Ala Tyr	Arg Val	Asp	Lys Ser	Pro	
20080			20085			20090			
tat aac	caa agc	atg tat	tac	gct ggc	ctt cca	gtg	gac gat	ttc	117577
Tyr Asn	Gln Ser	Met Tyr	Tyr	Ala Gly	Leu Pro	Val	Asp Asp	Phe	
20095			20100			20105			
gag gac	tcg gaa	tct acg	gat	acg gaa	gaa gag	ttt	ggt aac	gcg	117622
Glu Asp	Ser Glu	Ser Thr	Asp	Thr Glu	Glu Glu	Phe	Gly Asn	Ala	
20110			20115			20120			
att gga	ggg agt	cac ggg	ggt	tcg agt	tac acg	gtg	tat ata	gat	117667
Ile Gly	Gly Ser	His Gly	Gly	Ser Ser	Tyr Thr	Val	Tyr Ile	Asp	
20125			20130			20135			

aag acc cgg tga tcaccgaacc ggggcaacgc cgagcgtgta aatttaaata 117719
 Lys Thr Arg
 20140

aaaaacagta cgctttttatc cgggtgtatgt tttaaattta tttttttttt ctatataaag 117779
 ggatgggggtg tcaggatctc tcgtaggttc ttgggactcc aagggaacccg cagcccaggt 117839
 acgcgtcaaa aagcctgtga caaatcccc cggggcggtc atataattcg gcgcggatgc 117899
 atttattatc gggcgacaat ccaatagtcg gaagtccggc gtgtcccaaa cagcaccaat 117959
 atgccatcaa tatcagccgc tcgctgagct ccagatgcga ttgtggatcc ggcattgcatt 118019
 gctcgcgtaa taacgataac accgctctgc ggatcggcgg aaccgagggg ggacgttgct 118079
 tatccgctgc gagctccccg cacatccgtc cgaaggcgtc ctttgccctc ccccacaaac 118139
 tcgcgcacgg tctctcggag gggctgtgta taaaagcctc gtaggcctcg gtagatatgg 118199
 cgcatagcgc ggcggcgaag taccgttcgg cgtcgttcat gagagcctgg tgcgcggggg 118259
 tatcgtgtcg tgtgcagtaa agtccggcat attcaccgcc cgggtgctca ccgcgggatc 118319
 cgcagagatt cataccacac ggcccgtgtg gggaccccgt gggttaatgg agacgttcaa 118379
 accagcacc tctaccctct aatatccaca acaccccact ccccacaga cagacatcaa 118439
 aaaaagacac gagccaaacc attgtattta ttataaaga ctacacgcca tggggggggcg 118499
 gtatatcatg ccggcgcggg gcttcgtgtc gacgtcgtt ccaatctaca ccccctcgc 118559
 ccaacgcggt gagcgttttc gcggctgtat attccgcggt ttctgcacc gcgtatcgct 118619
 cgatggcacg ctgggggtctc ttgggggacg ggggtgtgca cccatccccg tctcgataac 118679
 aatcgccggg taccctgtct ggttcacaag aatcggtgct ctctctgat tcttcttcca 118739
 ctataaagtc ttccccgtcc gatgattccg cgtcgggaatc ccgaaattca attacatccg 118799
 atggcgtaga cccatcatcg tcgctatcgt cttcaccacc atcatcagat acgtcacatt 118859
 ccagtgcgct cctatgcaaa ggaacattcg gcgcctcaat gaaccctct tcccccgag 118919
 ggggtcgatg ggacacttcc attaaagtag cgcgtaagca ctgcgtctgg gtgggttgaa 118979
 gctgtaacaa ttccctcccag cacgctaacg tgggacgctg tctgggtgca cccattagat 119039
 aaaagtcgag gcatatgcgc cgcaatcttc gtgaatctcg cgtgacgcgt cccgacgact 119099
 gtgcaataca taaaaaaca cggttgatgt cctcaacgag cctggccggg tggatctccc 119159
 aaccgcgagt acaaaacgcg ccggggcccc gcgacgtatc ccggccgttc aggggtcctg 119219
 gtgcagatcc atattccatc ttcccgtaa catcaaccga tgccccgggt tttgactcgg 119279
 acgagtcgcc ccgcgtagcc ggtgaggtgc aaaacatgtc cttggggccg tagtaacctt 119339
 ttcccttaaa accgactcga cgctgtcgcg ttatgaatcg gacgaaccct gcacaacaaa 119399

acacacaccc aaacgtttac atctatgaat aaggctactt gggtaaaatg gcaatggggg 119459
 attccggggc gggagacctt cgattgggtt gcctttataa caccaaaaaa aggggggggc 119519
 cccgtgtgtt tttttttatc acgtcaaatac gatttttaaaa agcctgccgc tccatttgga 119579
 atatatatat tctgtgaaaa gcccgccac accccataaa accgcgacat cgcggaaca 119639
 cgcggaaca agaaactctc tctctttctc tatatatata tatatatata tatatatata 119699
 tagaaagaaa gtgcgaacgg tgggtggaca catgccaaaa catgaaaacc catacagtga 119759
 aaaaacggga agtgcgaatg cagatcaaaa gagtgtatcc gattggcgta caccacagac 119819
 atgcggacgc ccaatttaac cccccccctt tttcaccccc ccaccccacc ccattccacc 119879
 ccaggaagtg cgaacgggtt tacatgcctc agatatgaag ttcttcgact tgtttttgaa 119939
 taaatttttt tgtgattttc tacaacgggt tagagaatta tggttataaa catcggcggg 119999
 gtaccgcgcc ccctcccat cggcggggta ccgcgcccc tcccatcgg cggggtaccg 120059
 cgccccctcc ccatcggcgg ggtaccgcgc ccctcccca tcggcgggg accgcgcccc 120119
 ctcccatcg gcgggggggt acgtgaacac cacaaccgcg tgtgtatttt atgggttacc 120179
 gcgggcttcg tgccgcctga cataatcggt gggaggggtg gtggtgtata cgcttggtga 120239
 ttgcgcgaac gtaatgacga cggagaggga ccaaacaca ccgtcgacgt gcatttgatt 120299
 aactagatgc cggatgggtg gaaacaacc gtgttatata agatgttttg catgtgagac 120359
 aacccaatt gtgtttatgt atattatata tcgtctgtag acacacgatg attggttggt 120419
 atttaaacad atgtaaatga aattcacatg tctgggtatcc cttgttatga tgttgtaagg 120479
 tatgcgaaa tagacaccgg gcgtacatcg ccaaccagcg gtctctcctt aaacgcatac 120539
 tatggtccat gaacttcccg cctcgagtct cgtccaatca ctacatcgtc ttatcattaa 120599
 gaatatttac acggtgacga cacggggagg aaatatgcgg tcgagggggg ggcacaacac 120659
 gttttaagta ctggttgaac tccctcacca accgcaatcg caatcctttg aaggctgcga 120719
 gagcgtttgg aaaactcggg tacgtctaaa ttcaccccag tgcg atg gat acg 120772
 Met Asp Thr

ccg	ccg	atg	cag	cgc	tct	aca	ccc	caa	cgc	gcg	ggg	tcg	cct	gat	120817
Pro	Pro	Met	Gln	Arg	Ser	Thr	Pro	Gln	Arg	Ala	Gly	Ser	Pro	Asp	
20145					20150					20155					
act	ttg	gag	tta	atg	gac	ctg	ttg	gac	gcg	gcc	gcg	gcg	gcc	gcc	120862
Thr	Leu	Glu	Leu	Met	Asp	Leu	Leu	Asp	Ala	Ala	Ala	Ala	Ala	Ala	
20160					20165					20170					
gaa	cac	agg	gcc	cgg	gtg	gtc	acc	tcg	agt	cag	cct	gac	gat	cta	120907
Glu	His	Arg	Ala	Arg	Val	Val	Thr	Ser	Ser	Gln	Pro	Asp	Asp	Leu	
20175					20180					20185					

cta Leu 20190	ttt Phe	gga Gly	gag Glu	aac Asn	ggg Gly 20195	gtc Val	atg Met	gtg Val	gga Gly	cgg Arg 20200	gaa Glu	cac His	gag Glu	atc Ile	120952
gtt Val 20205	tca Ser	att Ile	ccc Pro	tcc Ser	gta Val 20210	tcg Ser	gga Gly	ctt Leu	caa Gln	cca Pro 20215	gaa Glu	ccc Pro	aga Arg	acg Thr	120997
gaa Glu 20220	gat Asp	gtt Val	ggc Gly	gaa Glu	gag Glu 20225	cta Leu	aca Thr	caa Gln	gac Asp	gac Asp 20230	tac Tyr	gta Val	tgc Cys	gag Glu	121042
gac Asp 20235	ggc Gly	cag Gln	gat Asp	cta Leu	atg Met 20240	ggc Gly	tcg Ser	cct Pro	gta Val	atc Ile 20245	ccg Pro	ctg Leu	gcc Ala	gag Glu	121087
gtc Val 20250	ttc Phe	cac His	acc Thr	cga Arg	ttc Phe 20255	tcg Ser	gag Glu	gcc Ala	ggc Gly	gcg Ala 20260	cga Arg	gaa Glu	cca Pro	aca Thr	121132
gga Gly 20265	gcc Ala	gat Asp	cgc Arg	tcc Ser	ctt Leu 20270	gag Glu	aca Thr	gtc Val	tct Ser	ctc Leu 20275	gga Gly	acg Thr	aag Lys	ctt Leu	121177
gct Ala 20280	agg Arg	tct Ser	cca Pro	aaa Lys	cca Pro 20285	ccg Pro	atg Met	aac Asn	gat Asp	ggg Gly 20290	gaa Glu	acg Thr	ggc Gly	aga Arg	121222
ggc Gly 20295	acg Thr	acc Thr	cct Pro	ccg Pro	ttc Phe 20300	ccg Pro	cag Gln	gcc Ala	ttc Phe	tcc Ser 20305	cct Pro	gta Val	tcc Ser	ccc Pro	121267
gcg Ala 20310	tct Ser	cct Pro	gtt Val	gga Gly	gac Asp 20315	gcc Ala	gcc Ala	ggg Gly	aac Asn	gat Asp 20320	caa Gln	cgg Arg	gaa Glu	gac Asp	121312
cag Gln 20325	cgg Arg	tct Ser	ata Ile	ccc Pro	cga Arg 20330	caa Gln	acg Thr	acg Thr	aga Arg	gga Gly 20335	aat Asn	tca Ser	cca Pro	ggc Gly	121357
ttg Leu 20340	ccg Pro	tcg Ser	gtg Val	gtc Val	cat His 20345	cga Arg	gac Asp	aga Arg	caa Gln	act Thr 20350	cag Gln	tcc Ser	atc Ile	tcg Ser	121402
ggc Gly 20355	aaa Lys	aag Lys	ccg Pro	ggc Gly	gat Asp 20360	gag Glu	caa Gln	gcg Ala	ggc Gly	cat His 20365	gcg Ala	cat His	gca Ala	tcg Ser	121447
ggg Gly 20370	gac Asp	gga Gly	gta Val	gtt Val	ctc Leu 20375	cag Gln	aaa Lys	act Thr	caa Gln	cgg Arg 20380	ccc Pro	gct Ala	cag Gln	gga Gly	121492
aag Lys 20385	agc Ser	ccg Pro	aag Lys	aaa Lys	aag Lys 20390	act Thr	ttg Leu	aag Lys	gtt Val	aag Lys 20395	gtc Val	cca Pro	ctc Leu	ccg Pro	121537
gcg Ala 20400	cgg Arg	aaa Lys	ccc Pro	ggc Gly	gga Gly 20405	cct Pro	gta Val	ccc Pro	ggc Gly	ccg Pro 20410	gtt Val	gag Glu	caa Gln	ttg Leu	121582

tac Tyr 20415	cac His	gtc Val	ctt Leu	tcg Ser	gac Asp 20420	agc Ser	gtt Val	ccc Pro	gct Ala	aag Lys 20425	ggg Gly	gca Ala	aag Lys	gcg Ala	121627
gac Asp 20430	ctg Leu	ccg Pro	ttt Phe	gag Glu	acc Thr 20435	gat Asp	gat Asp	acc Thr	cgc Arg	cca Pro 20440	agg Arg	aaa Lys	cat His	gat Asp	121672
gcc Ala 20445	cgg Arg	ggt Gly	ata Ile	aca Thr	cct Pro 20450	cgc Arg	gtc Val	cct Pro	gga Gly	cgt Arg 20455	tcg Ser	tcg Ser	ggg Gly	ggc Gly	121717
aaa Lys 20460	cct Pro	aga Arg	gcg Ala	ttt Phe	ttg Leu 20465	gcc Ala	ctg Leu	ccg Pro	gga Gly	aga Arg 20470	tcc Ser	cac His	gca Ala	cca Pro	121762
gac Asp 20475	ccg Pro	att Ile	gag Glu	gat Asp	gac Asp 20480	agc Ser	cca Pro	gtg Val	gag Glu	aaa Lys 20485	aag Lys	cca Pro	aag Lys	agt Ser	121807
cgt Arg 20490	gag Glu	ttt Phe	gtt Val	tcg Ser	tct Ser 20495	tca Ser	tcc Ser	tct Ser	tcc Ser	tcg Ser 20500	tcg Ser	tgg Trp	gga Gly	tcg Ser	121852
tca Ser 20505	tcg Ser	gag Glu	gat Asp	gaa Glu	gac Asp 20510	gat Asp	gaa Glu	ccc Pro	cgg Arg	cgc Arg 20515	gtt Val	tcg Ser	gtg Val	gga Gly	121897
agt Ser 20520	gaa Glu	act Thr	aca Thr	ggc Gly	agc Ser 20525	agg Arg	tcc Ser	gga Gly	cgc Arg	gaa Glu 20530	cac His	gcc Ala	cct Pro	tcc Ser	121942
ccg Pro 20535	tca Ser	aat Asn	tcg Ser	gat Asp	gat Asp 20540	tcg Ser	gac Asp	tca Ser	aat Asn	gat Asp 20545	ggg Gly	ggg Gly	tcg Ser	acg Thr	121987
aaa Lys 20550	caa Gln	aat Asn	atc Ile	caa Gln	ccg Pro 20555	gga Gly	tat Tyr	cga Arg	tcc Ser	atc Ile 20560	agc Ser	ggg Gly	ccc Pro	gat Asp	122032
ccg Pro 20565	agg Arg	att Ile	cgt Arg	aag Lys	acc Thr 20570	aaa Lys	cgt Arg	ctt Leu	gcg Ala	ggg Gly 20575	gaa Glu	ccg Pro	ggg Gly	cgc Arg	122077
cag Gln 20580	aga Arg	cag Gln	aaa Lys	tca Ser	ttt Phe 20585	tcc Ser	ctg Leu	ccg Pro	cga Arg	tcc Ser 20590	aga Arg	acc Thr	ccg Pro	ata Ile	122122
att Ile 20595	ccc Pro	ccg Pro	gtg Val	tcg Ser	ggg Gly 20600	ccg Pro	ctc Leu	atg Met	atg Met	ccc Pro 20605	gac Asp	gga Gly	agc Ser	cct Pro	122167
tgg Trp 20610	ccc Pro	gga Gly	tcg Ser	gca Ala	ccc Pro 20615	ctc Leu	cca Pro	tcc Ser	aac Asn	agg Arg 20620	gtg Val	cgg Arg	ttt Phe	gga Gly	122212
ccg Pro 20625	tcc Ser	ggg Gly	gag Glu	acc Thr	aga Arg 20630	gag Glu	ggg Gly	cac His	tgg Trp	gag Glu 20635	gat Asp	gag Glu	gct Ala	gtg Val	122257

aga Arg 20640	gcg Ala	gcg Ala	cgg Arg	gct Ala	cgt Arg 20645	tac Tyr	gag Glu	gcc Ala	tca Ser	acg Thr 20650	gaa Glu	ccc Pro	gtg Val	ccg Pro	122302
ctt Leu 20655	tac Tyr	gtg Val	ccg Pro	gag Glu	ttg Leu 20660	gga Gly	gat Asp	ccg Pro	gct Ala	aga Arg 20665	cag Gln	tac Tyr	cgc Arg	gcg Ala	122347
ctg Leu 20670	att Ile	aac Asn	ctg Leu	atc Ile	tac Tyr 20675	tgt Cys	cca Pro	gac Asp	aga Arg	gac Asp 20680	cct Pro	ata Ile	gca Ala	tgg Trp	122392
ctc Leu 20685	cag Gln	aac Asn	ccc Pro	aag Lys	ctg Leu 20690	acc Thr	ggt Gly	gtc Val	aac Asn	tcg Ser 20695	gcc Ala	ctg Leu	aac Asn	cag Gln	122437
ttc Phe 20700	tac Tyr	caa Gln	aag Lys	ctg Leu	ttg Leu 20705	cca Pro	ccg Pro	gga Gly	cgg Arg	gcg Ala 20710	ggt Gly	acc Thr	gcc Ala	gtt Val	122482
acg Thr 20715	ggg Gly	agc Ser	gta Val	gcg Ala	tct Ser 20720	ccc Pro	gtt Val	ccg Pro	cat His	gta Val 20725	ggc Gly	gaa Glu	gcc Ala	atg Met	122527
gcc Ala 20730	acg Thr	ggg Gly	gag Glu	gcc Ala	ctc Leu 20735	tgg Trp	gct Ala	ctc Leu	ccc Pro	cac His 20740	gcg Ala	gcc Ala	gcg Ala	gcc Ala	122572
gtg Val 20745	gct Ala	atg Met	agc Ser	cgt Arg	cga Arg 20750	tac Tyr	gac Asp	cgg Arg	gcc Ala	caa Gln 20755	aaa Lys	cac His	ttt Phe	atc Ile	122617
cta Leu 20760	cag Gln	agt Ser	ctc Leu	cgc Arg	aga Arg 20765	gcc Ala	ttt Phe	gcc Ala	agc Ser	atg Met 20770	gca Ala	tac Tyr	ccc Pro	gag Glu	122662
gca Ala 20775	acg Thr	ggc Gly	tcc Ser	agt Ser	ccg Pro 20780	gcg Ala	gcg Ala	cgg Arg	atc Ile	tcc Ser 20785	cgc Arg	ggt Gly	cac His	cct Pro	122707
tct Ser 20790	cca Pro	aca Thr	acc Thr	ccg Pro	gcc Ala 20795	aca Thr	cag Gln	gct Ala	ccc Pro	gac Asp 20800	cct Pro	cag Gln	ccg Pro	tcg Ser	122752
gcc Ala 20805	gcc Ala	gca Ala	cgc Arg	tct Ser	ctt Leu 20810	tct Ser	gtg Val	tgt Cys	cca Pro	ccg Pro 20815	gat Asp	gat Asp	cgt Arg	tta Leu	122797
cga Arg 20820	act Thr	ccg Pro	cgc Arg	aag Lys	cgc Arg 20825	aag Lys	tcc Ser	cag Gln	cca Pro	gtc Val 20830	gag Glu	agc Ser	aga Arg	agc Ser	122842
ctc Leu 20835	ctc Leu	gac Asp	aag Lys	att Ile	agg Arg 20840	gag Glu	aca Thr	ccc Pro	gtc Val	gcg Ala 20845	gac Asp	gcc Ala	cgg Arg	gtt Val	122887
gca Ala 20850	gac Asp	gat Asp	cat His	gtg Val	gtt Val 20855	tcc Ser	aag Lys	gcc Ala	aag Lys	agg Arg 20860	cgg Arg	gta Val	tcc Ser	gag Glu	122932

ccc Pro 20865	gtg Val	acc Thr	atc Ile	acc Thr	tcg Ser 20870	ggc Gly	cct Pro	gtg Val	gtg Val	gat Asp 20875	ccc Pro	ccc Pro	gcc Ala	gta Val	122977
ata Ile 20880	acg Thr	atg Met	cca Pro	ctt Leu	gac Asp 20885	gga Gly	ccg Pro	gcc Ala	cca Pro	aac Asn 20890	ggg Gly	gga Gly	ttt Phe	cgg Arg	123022
cgt Arg 20895	att Ile	ccc Pro	cgg Arg	ggg Gly	gcc Ala 20900	ctg Leu	cat His	acc Thr	ccg Pro	gtc Val 20905	ccg Pro	tcg Ser	gac Asp	cag Gln	123067
gct Ala 20910	cgc Arg	aag Lys	gcg Ala	tac Tyr	tgt Cys 20915	acc Thr	ccc Pro	gaa Glu	acc Thr	atc Ile 20920	gcc Ala	cgt Arg	ctg Leu	gtc Val	123112
gac Asp 20925	gac Asp	cca Pro	ttg Leu	ttt Phe	ccc Pro 20930	acg Thr	gcc Ala	tgg Trp	cgc Arg	cct Pro 20935	gcg Ala	cta Leu	agc Ser	ttt Phe	123157
gat Asp 20940	ccc Pro	ggc Gly	gcc Ala	ttg Leu	gcg Ala 20945	gaa Glu	atc Ile	gcc Ala	gct Ala	cgg Arg 20950	cgt Arg	ccg Pro	ggc Gly	gga Gly	123202
gga Gly 20955	gac Asp	cga Arg	cgg Arg	ttt Phe	ggt Gly 20960	cca Pro	ccc Pro	agc Ser	gga Gly	gtg Val 20965	gag Glu	gcg Ala	ctg Leu	cga Arg	123247
cgg Arg 20970	agg Arg	tgc Cys	gcc Ala	tgg Trp	atg Met 20975	cgg Arg	cag Gln	atc Ile	cca Pro	gac Asp 20980	ccg Pro	gag Glu	gat Asp	gtg Val	123292
agg Arg 20985	ctt Leu	ctg Leu	atc Ile	atc Ile	tac Tyr 20990	gat Asp	ccg Pro	ttg Leu	ccc Pro	gga Gly 20995	gag Glu	gac Asp	atc Ile	aac Asn	123337
ggc Gly 21000	ccc Pro	ctc Leu	gag Glu	agc Ser	acc Thr 21005	ctc Leu	gcg Ala	aca Thr	gat Asp	ccg Pro 21010	gga Gly	ccg Pro	tca Ser	tgg Trp	123382
agt Ser 21015	cca Pro	tcc Ser	cga Arg	ggg Gly	gga Gly 21020	ctg Leu	tct Ser	gtg Val	gtc Val	ctg Leu 21025	gca Ala	gcc Ala	ctg Leu	agt Ser	123427
aac Asn 21030	cgg Arg	ttg Leu	tgc Cys	ctg Leu	ccg Pro 21035	agc Ser	act Thr	cat His	gcc Ala	tgg Trp 21040	gcc Ala	ggg Gly	aac Asn	tgg Trp	123472
acc Thr 21045	ggc Gly	ccg Pro	ccg Pro	gac Asp	gtg Val 21050	tcc Ser	gct Ala	ttg Leu	aac Asn	gcc Ala 21055	cgg Arg	ggc Gly	gtt Val	tta Leu	123517
tta Leu 21060	ctg Leu	tcg Ser	acc Thr	cga Arg	gac Asp 21065	ctg Leu	gcc Ala	ttt Phe	gcc Ala	ggg Gly 21070	gcc Ala	gtc Val	gag Glu	tat Tyr	123562
cta Leu 21075	ggc Gly	tcg Ser	cgg Arg	ttg Leu	gcc Ala 21080	tct Ser	gcc Ala	cgg Arg	cgc Arg	cgg Arg 21085	ttg Leu	ctg Leu	gtg Val	ttg Leu	123607

gac Asp 21090	gcg Ala	gtg Val	gcc Ala	ctc Leu	gag Glu 21095	agg Arg	tgg Trp	ccc Pro	agg Arg	gat Asp 21100	gga Gly	ccc Pro	gct Ala	ttg Leu	123652
tct Ser 21105	cag Gln	tat Tyr	cac His	gtg Val	tac Tyr 21110	gtc Val	cgg Arg	gcc Ala	ccg Pro	gcg Ala 21115	cga Arg	ccg Pro	gac Asp	gcc Ala	123697
cag Gln 21120	gcc Ala	gtc Val	gtc Val	cga Arg	tgg Trp 21125	cca Pro	gac Asp	tcg Ser	gcg Ala	gtc Val 21130	aca Thr	gaa Glu	gga Gly	ctc Leu	123742
gcc Ala 21135	cgg Arg	gcc Ala	gtg Val	ttt Phe	gca Ala 21140	tcg Ser	tcg Ser	cgc Arg	acc Thr	ttt Phe 21145	ggg Gly	cca Pro	gcg Ala	agt Ser	123787
ttt Phe 21150	gct Ala	cgt Arg	atc Ile	gag Glu	act Thr 21155	gcg Ala	ttt Phe	gcc Ala	aac Asn	ctg Leu 21160	tac Tyr	ccg Pro	ggc Gly	gaa Glu	123832
caa Gln 21165	ccc Pro	ctg Leu	tgt Cys	ttg Leu	tgc Cys 21170	cgc Arg	ggg Gly	ggg Gly	aac Asn	gtc Val 21175	gca Ala	tac Tyr	acc Thr	gtg Val	123877
tgt Cys 21180	acc Thr	cgc Arg	gcg Ala	ggc Gly	ccc Pro 21185	aag Lys	acc Thr	cgc Arg	gtc Val	ccc Pro 21190	ctg Leu	tcg Ser	ccc Pro	cgt Arg	123922
gaa Glu 21195	tac Tyr	cgg Arg	cag Gln	tac Tyr	gtg Val 21200	ctg Leu	ccg Pro	ggg Gly	ttt Phe	gac Asp 21205	ggg Gly	tgc Cys	aag Lys	gac Asp	123967
ctc Leu 21210	gcg Ala	cga Arg	cag Gln	tct Ser	cgg Arg 21215	ggg Gly	ctg Leu	ggg Gly	ctc Leu	ggg Gly 21220	gca Ala	gcc Ala	gac Asp	ttt Phe	124012
gtg Val 21225	gac Asp	gag Glu	gag Ala	gca Ala	cat His 21230	agc Ser	cac His	cgc Arg	gca Ala	gca Ala 21235	aac Asn	cga Arg	tgg Trp	ggc Gly	124057
ctg Leu 21240	ggg Gly	gcc Ala	gag Ala	ctt Leu	cga Arg 21245	ccc Pro	gtc Val	ttc Phe	ctt Leu	ccc Pro 21250	gag Glu	gga Gly	cgg Arg	aga Arg	124102
ccg Pro 21255	ggg Gly	gcc Ala	gcc Ala	ggg Gly	ccg Pro 21260	gag Glu	gcc Ala	ggc Gly	gac Asp	gta Val 21265	ccc Pro	acc Thr	tgg Trp	gag Ala	124147
agg Arg 21270	gtg Val	ttt Phe	tgc Cys	cgc Arg	cac His 21275	gcc Ala	ctg Leu	ctg Leu	gaa Glu	ccc Pro 21280	gac Asp	cct Pro	gcc Ala	gca Ala	124192
gaa Glu 21285	cca Pro	ctc Leu	gtg Val	ctt Leu	cca Pro 21290	ccc Pro	gtg Val	gcc Ala	ggg Gly	cgg Arg 21295	tcg Ser	gtg Val	gag Ala	ctg Leu	124237
tat Tyr 21300	gag Ala	tcg Ser	gag Ala	gac Asp	gag Glu 21305	gct Ala	cgg Arg	aat Asn	gcc Ala	ctc Leu 21310	ccc Pro	ccg Pro	att Ile	ccc Pro	124282

aga gta atg tgg ccg ccc ggt ttt ggg gcc gcg gag acg gtg ttg 124327
 Arg Val Met Trp Pro Pro Gly Phe Gly Ala Ala Glu Thr Val Leu
 21315 21320 21325

gag ggg agc gac gga aca cgg ttc gtg ttc gga cac cac ggg ggc 124372
 Glu Gly Ser Asp Gly Thr Arg Phe Val Phe Gly His His Gly Gly
 21330 21335 21340

tcg gaa cgg ccg tca gaa acc cag gcg ggg cga cag cgg cgc acc 124417
 Ser Glu Arg Pro Ser Glu Thr Gln Ala Gly Arg Gln Arg Arg Thr
 21345 21350 21355

gca gac gac aga gaa cac gct ttg gag ctg gac gat tgg gag gtg 124462
 Ala Asp Asp Arg Glu His Ala Leu Glu Leu Asp Asp Trp Glu Val
 21360 21365 21370

ggg tgt gaa gac gcg tgg gac agc gag gag ggg ggc ggg gac gac 124507
 Gly Cys Glu Asp Ala Trp Asp Ser Glu Glu Gly Gly Gly Asp Asp
 21375 21380 21385

ggg gac gca ccg ggg tca tcc ttt ggg gtg agc atc gtg tcg gtg 124552
 Gly Asp Ala Pro Gly Ser Ser Phe Gly Val Ser Ile Val Ser Val
 21390 21395 21400

gcc ccg ggt gtg ctg cga gac cgc cgg gtg ggt ttg cgc ccg gcg 124597
 Ala Pro Gly Val Leu Arg Asp Arg Arg Val Gly Leu Arg Pro Ala
 21405 21410 21415

gtc aag gtg gag ctg ttg tcc tcg tcc tcg tcc tcc gag gac gag 124642
 Val Lys Val Glu Leu Leu Ser Ser Ser Ser Ser Ser Glu Asp Glu
 21420 21425 21430

gac gat gtg tgg gga ggg cgc ggg ggg agg agc ccc ccg cag agt 124687
 Asp Asp Val Trp Gly Gly Arg Gly Gly Arg Ser Pro Pro Gln Ser
 21435 21440 21445

cgg ggg tga cggagtcgcc tcctttttctc gtgagcgcca ctggcgcgcg 124736
 Arg Gly
 21450

gactgtttgt tgtaataaaa agcggaaacgg tttttatgaa aaaagtgtct gtctgtctgt 124796

gcggggcgggc gacggggcggg ctgggtcggac cccccccga aaataacccc cccccgggtt 124856

ctggggcgccc ggcggacccc gggagagg 124884

<210> 9
 <211> 238
 <212> PRT
 <213> Varicella zoster

<400> 9

Met His Val Ile Ser Glu Thr Leu Ala Tyr Gly His Val Pro Ala Phe
 1 5 10 15

Ile Met Gly Ser Thr Leu Val Arg Pro Ser Leu Asn Ala Thr Ala Glu
 20 25 30

Glu Asn Pro Ala Ser Glu Thr Arg Cys Leu Leu Arg Val Leu Ala Gly
 35 40 45

Arg Thr Val Asp Leu Pro Gly Gly Gly Thr Leu His Ile Thr Cys Thr
 50 55 60

Lys Thr Tyr Val Ile Ile Gly Lys Tyr Ser Lys Pro Gly Glu Arg Leu
 65 70 75 80

Ser Leu Ala Arg Leu Ile Gly Arg Ala Met Thr Pro Gly Gly Ala Arg
 85 90 95

Thr Phe Ile Ile Leu Ala Met Lys Glu Lys Arg Ser Thr Thr Leu Gly
 100 105 110

Tyr Glu Cys Gly Thr Gly Leu His Leu Leu Ala Pro Ser Met Gly Thr
 115 120 125

Phe Leu Arg Thr His Gly Leu Ser Asn Arg Asp Leu Cys Leu Trp Arg
 130 135 140

Gly Asn Ile Tyr Asp Met His Met Gln Arg Leu Met Phe Trp Glu Asn
 145 150 155 160

Ile Ala Gln Asn Thr Thr Glu Thr Pro Cys Ile Thr Ser Thr Leu Thr
 165 170 175

Cys Asn Leu Thr Glu Asp Ser Gly Glu Ala Ala Leu Thr Thr Ser Asp
 180 185 190

Arg Pro Thr Leu Pro Thr Leu Thr Ala Gln Gly Arg Pro Thr Val Ser
 195 200 205

Asn Ile Arg Gly Ile Leu Lys Gly Ser Pro Arg Gln Gln Pro Val Cys
 210 215 220

His Arg Val Arg Phe Ala Glu Pro Thr Glu Gly Val Leu Met
 225 230 235

<210> 10
 <211> 259
 <212> PRT
 <213> Varicella zoster

<400> 10

Met	Gln	Thr	Val	Cys	Ala	Ser	Leu	Cys	Gly	Tyr	Ala	Arg	Ile	Pro	Thr	1	5	10	15
Glu	Glu	Pro	Ser	Tyr	Glu	Glu	Val	Arg	Val	Asn	Thr	His	Pro	Gln	Gly	20	25	30	
Ala	Ala	Leu	Leu	Arg	Leu	Gln	Glu	Ala	Leu	Thr	Ala	Val	Asn	Gly	Leu	35	40	45	
Leu	Pro	Ala	Pro	Leu	Thr	Leu	Glu	Asp	Val	Val	Ala	Ser	Ala	Asp	Asn	50	55	60	
Thr	Arg	Arg	Leu	Val	Arg	Ala	Gln	Ala	Leu	Ala	Arg	Thr	Tyr	Ala	Ala	65	70	75	80
Cys	Ser	Arg	Asn	Ile	Glu	Cys	Leu	Lys	Gln	His	His	Phe	Thr	Glu	Asp	85	90	95	
Asn	Pro	Gly	Leu	Asn	Ala	Val	Val	Arg	Ser	His	Met	Glu	Asn	Ser	Lys	100	105	110	
Arg	Leu	Ala	Asp	Met	Cys	Leu	Ala	Ala	Ile	Thr	His	Leu	Tyr	Leu	Ser	115	120	125	
Val	Gly	Ala	Val	Asp	Val	Thr	Thr	Asp	Asp	Ile	Val	Asp	Gln	Thr	Leu	130	135	140	
Arg	Met	Thr	Ala	Glu	Ser	Glu	Val	Val	Met	Ser	Asp	Val	Val	Leu	Leu	145	150	155	160
Glu	Lys	Thr	Leu	Gly	Val	Val	Ala	Lys	Pro	Gln	Ala	Ser	Phe	Asp	Val	165	170	175	
Ser	His	Asn	His	Glu	Leu	Ser	Ile	Ala	Lys	Gly	Glu	Asn	Val	Gly	Leu	180	185	190	
Lys	Thr	Ser	Pro	Ile	Lys	Ser	Glu	Ala	Thr	Gln	Leu	Ser	Glu	Ile	Lys	195	200	205	
Pro	Pro	Leu	Ile	Glu	Val	Ser	Asp	Asn	Asn	Thr	Ser	Asn	Leu	Thr	Lys	210	215	220	
Lys	Thr	Tyr	Pro	Thr	Glu	Thr	Leu	Gln	Pro	Val	Leu	Thr	Pro	Lys	Gln	225	230	235	240

Thr Gln Asp Val Gln Arg Thr Thr Pro Ala Ile Lys Lys Ser His Val
245 250 255

Met Leu Val

<210> 11
<211> 87
<212> PRT
<213> Varicella zoster

<400> 11

Met Gly Ser Ile Thr Ala Ser Phe Ile Leu Ile Thr Met Gln Ile Leu
1 5 10 15

Phe Phe Cys Glu Asp Ser Ser Gly Glu Pro Asn Phe Ala Glu Arg Asn
20 25 30

Phe Trp His Ala Ser Cys Ser Ala Arg Gly Val Tyr Ile Asp Gly Ser
35 40 45

Met Ile Thr Thr Leu Phe Phe Tyr Ala Ser Leu Leu Gly Val Cys Val
50 55 60

Ala Leu Ile Ser Leu Ala Tyr His Ala Cys Phe Arg Leu Phe Thr Arg
65 70 75 80

Ser Val Leu Arg Ser Thr Trp
85

<210> 12
<211> 302
<212> PRT
<213> Varicella zoster

<400> 12

Met Ala Ser Ser Asp Gly Asp Arg Leu Cys Arg Ser Asn Ala Val Arg
1 5 10 15

Arg Lys Thr Thr Pro Ser Tyr Ser Gly Gln Tyr Arg Thr Ala Arg Arg
20 25 30

Ser Val Val Val Gly Pro Pro Asp Asp Ser Asp Asp Ser Leu Gly Tyr
35 40 45

Ile Thr Thr Val Gly Ala Asp Ser Pro Ser Pro Val Tyr Ala Asp Leu
154

50

55

60

Tyr Phe Glu His Lys Asn Thr Thr Pro Arg Val His Gln Pro Asn Asp
65 70 75 80

Ser Ser Gly Ser Glu Asp Asp Phe Glu Asp Ile Asp Glu Val Val Ala
85 90 95

Ala Phe Arg Glu Ala Arg Leu Arg His Glu Leu Val Glu Asp Ala Val
100 105 110

Tyr Glu Asn Pro Leu Ser Val Glu Lys Pro Ser Arg Ser Phe Thr Lys
115 120 125

Asn Ala Ala Val Lys Pro Lys Leu Glu Asp Ser Pro Lys Arg Ala Pro
130 135 140

Pro Gly Ala Gly Ala Ile Ala Ser Gly Arg Pro Ile Ser Phe Ser Thr
145 150 155 160

Ala Pro Lys Thr Ala Thr Ser Ser Trp Cys Gly Pro Thr Pro Ser Tyr
165 170 175

Asn Lys Arg Val Phe Cys Glu Ala Val Arg Arg Val Ala Ala Met Gln
180 185 190

Ala Gln Lys Ala Ala Glu Ala Ala Trp Asn Ser Asn Pro Pro Arg Asn
195 200 205

Asn Ala Glu Leu Asp Arg Leu Leu Thr Gly Ala Val Ile Arg Ile Thr
210 215 220

Val His Glu Gly Leu Asn Leu Ile Gln Ala Ala Asn Glu Ala Asp Leu
225 230 235 240

Gly Glu Gly Ala Ser Val Ser Lys Arg Gly His Asn Arg Lys Thr Gly
245 250 255

Asp Leu Gln Gly Gly Met Gly Asn Glu Pro Met Tyr Ala Gln Val Arg
260 265 270

Lys Pro Lys Ser Arg Thr Asp Thr Gln Thr Thr Gly Arg Ile Thr Asn
275 280 285

Arg Ser Arg Ala Arg Ser Ala Ser Arg Thr Asp Thr Arg Lys
155

290

295

300

<210> 13
 <211> 410
 <212> PRT
 <213> Varicella zoster

<400> 13

Met Glu Cys Asn Leu Gly Thr Glu His Pro Ser Thr Asp Thr Trp Asn
 1 5 10 15

Arg Ser Lys Thr Glu Gln Ala Val Val Asp Ala Phe Asp Glu Ser Leu
 20 25 30

Phe Gly Asp Val Ala Ser Asp Ile Gly Phe Glu Thr Ser Leu Tyr Ser
 35 40 45

His Ala Val Lys Thr Ala Pro Ser Pro Pro Trp Val Ala Ser Pro Lys
 50 55 60

Ile Leu Tyr Gln Gln Leu Ile Arg Asp Leu Asp Phe Ser Glu Gly Pro
 65 70 75 80

Arg Leu Leu Ser Cys Leu Glu Thr Trp Asn Glu Asp Leu Phe Ser Cys
 85 90 95

Phe Pro Ile Asn Glu Asp Leu Tyr Ser Asp Met Met Val Leu Ser Pro
 100 105 110

Asp Pro Asp Asp Val Ile Ser Thr Val Ser Thr Lys Asp His Val Glu
 115 120 125

Met Phe Asn Leu Thr Thr Arg Gly Ser Val Arg Leu Pro Ser Pro Pro
 130 135 140

Lys Gln Pro Thr Gly Leu Pro Ala Tyr Val Gln Glu Val Gln Asp Ser
 145 150 155 160

Phe Thr Val Glu Leu Arg Ala Arg Glu Glu Ala Tyr Thr Lys Leu Leu
 165 170 175

Val Thr Tyr Cys Lys Ser Ile Ile Arg Tyr Leu Gln Gly Thr Ala Lys
 180 185 190

Arg Thr Thr Ile Gly Leu Asn Ile Gln Asn Pro Asp Gln Lys Ala Tyr
 195 200 205

Thr Gln Leu Arg Gln Ser Ile Leu Leu Arg Tyr Tyr Arg Glu Val Ala
 210 215 220

Ser Leu Ala Arg Leu Leu Tyr Leu His Leu Tyr Leu Thr Val Thr Arg
 225 230 235 240

Glu Phe Ser Trp Arg Leu Tyr Ala Ser Gln Ser Ala His Pro Asp Val
 245 250 255

Phe Ala Ala Leu Lys Phe Thr Trp Thr Glu Arg Arg Gln Phe Thr Cys
 260 265 270

Ala Phe His Pro Val Leu Cys Asn His Gly Ile Val Leu Leu Glu Gly
 275 280 285

Lys Pro Leu Thr Ala Ser Ala Leu Arg Glu Ile Asn Tyr Arg Arg Arg
 290 295 300

Glu Leu Gly Leu Pro Leu Val Arg Cys Gly Leu Val Glu Glu Asn Lys
 305 310 315 320

Ser Pro Leu Val Gln Gln Pro Ser Phe Ser Val His Leu Pro Arg Ser
 325 330 335

Val Gly Phe Leu Thr His His Ile Lys Arg Lys Leu Asp Ala Tyr Ala
 340 345 350

Val Lys His Pro Gln Glu Pro Arg His Val Arg Ala Asp His Pro Tyr
 355 360 365

Ala Lys Val Val Glu Asn Arg Asn Tyr Gly Ser Ser Ile Glu Ala Met
 370 375 380

Ile Leu Ala Pro Pro Ser Pro Ser Glu Ile Leu Pro Gly Asp Pro Pro
 385 390 395 400

Arg Pro Pro Thr Cys Gly Phe Leu Thr Arg
 405 410

<210> 14
 <211> 819
 <212> PRT
 <213> Varicella zoster

<400> 14

Met	Gln	Ser	Gly	His	Tyr	Asn	Arg	Arg	Gln	Ser	Arg	Arg	Gln	Arg	Ile
1				5					10					15	
Ser	Ser	Asn	Thr	Thr	Asp	Ser	Pro	Arg	His	Thr	His	Gly	Thr	Arg	Tyr
			20					25					30		
Arg	Ser	Thr	Asn	Trp	Tyr	Thr	His	Pro	Pro	Gln	Ile	Leu	Ser	Asn	Ser
		35					40					45			
Glu	Thr	Leu	Val	Ala	Val	Gln	Glu	Leu	Leu	Asn	Ser	Glu	Met	Asp	Gln
	50					55					60				
Asp	Ser	Ser	Ser	Asp	Ala	Ser	Asp	Asp	Phe	Pro	Gly	Tyr	Ala	Leu	His
65					70					75					80
His	Ser	Thr	Tyr	Asn	Gly	Ser	Glu	Gln	Asn	Thr	Ser	Thr	Ser	Arg	His
				85					90					95	
Glu	Asn	Arg	Ile	Phe	Lys	Leu	Thr	Glu	Arg	Glu	Ala	Asn	Glu	Glu	Ile
			100					105					110		
Asn	Ile	Asn	Thr	Asp	Ala	Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	Glu	Gly
		115					120					125			
Glu	Ala	Glu	Glu	Asp	Ala	Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	Glu	Gly
	130					135					140				
Glu	Ala	Glu	Glu	Asp	Ala	Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	Glu	Gly
145					150					155					160
Glu	Ala	Glu	Glu	Asp	Ala	Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	Glu	Gly
				165					170					175	
Glu	Ala	Glu	Glu	Gly	Glu	Ala	Glu	Glu	Gly	Glu	Ala	Glu	Glu	Asp	Ala
			180					185					190		
Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	Glu	Asp	Ala	Ala	Glu	Glu	Asp	Ala
		195					200					205			
Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	Glu	Asp	Tyr	Phe	Ser	Val	Ser	Gln
	210					215					220				
Val	Cys	Ser	Arg	Asp	Ala	Asp	Glu	Val	Tyr	Phe	Thr	Leu	Asp	Pro	Glu
225					230					235					240

Ile	Ser	Tyr	Ser	Thr	Asp	Leu	Arg	Ile	Ala	Lys	Val	Met	Glu	Pro	Ala	245	250	255
Val	Ser	Lys	Glu	Leu	Asn	Val	Ser	Lys	Arg	Cys	Val	Glu	Pro	Val	Thr	260	265	270
Leu	Thr	Gly	Ser	Met	Leu	Ala	His	Asn	Gly	Phe	Asp	Glu	Ser	Trp	Phe	275	280	285
Ala	Met	Arg	Glu	Cys	Thr	Arg	Arg	Glu	Tyr	Ile	Thr	Val	Gln	Gly	Leu	290	295	300
Tyr	Asp	Pro	Ile	His	Leu	Arg	Tyr	Gln	Phe	Asp	Thr	Ser	Arg	Met	Thr	305	310	315
Pro	Pro	Gln	Ile	Leu	Arg	Thr	Ile	Pro	Ala	Leu	Pro	Asn	Met	Thr	Leu	325	330	335
Gly	Glu	Leu	Leu	Leu	Ile	Phe	Pro	Ile	Glu	Phe	Met	Ala	Gln	Pro	Ile	340	345	350
Ser	Ile	Glu	Arg	Ile	Leu	Val	Glu	Asp	Val	Phe	Leu	Asp	Arg	Arg	Ala	355	360	365
Ser	Ser	Lys	Thr	His	Lys	Tyr	Gly	Pro	Arg	Trp	Asn	Ser	Val	Tyr	Ala	370	375	380
Leu	Pro	Tyr	Asn	Ala	Gly	Lys	Met	Tyr	Val	Gln	His	Ile	Pro	Gly	Phe	385	390	395
Tyr	Asp	Val	Ser	Leu	Arg	Ala	Val	Gly	Gln	Gly	Thr	Ala	Ile	Trp	His	405	410	415
His	Met	Ile	Leu	Ser	Thr	Ala	Ala	Cys	Ala	Ile	Ser	Asn	Arg	Ile	Ser	420	425	430
His	Gly	Asp	Gly	Leu	Gly	Phe	Leu	Leu	Asp	Ala	Ala	Ile	Arg	Ile	Ser	435	440	445
Ala	Asn	Cys	Ile	Phe	Leu	Gly	Arg	Asn	Asp	Asn	Phe	Gly	Val	Gly	Asp	450	455	460
Pro	Cys	Trp	Leu	Glu	Asp	His	Leu	Ala	Gly	Leu	Pro	Arg	Glu	Ala	Val	465	470	475
																		480

Pro Asp Val Leu Gln Val Thr Gln Leu Val Leu Pro Asn Arg Gly Pro
485 490 495

Thr Val Ala Ile Met Arg Gly Phe Phe Gly Ala Leu Ala Tyr Trp Pro
500 505 510

Glu Leu Arg Ile Ala Ile Ser Glu Pro Ser Thr Ser Leu Val Arg Tyr
515 520 525

Ala Thr Gly His Met Glu Leu Ala Glu Trp Phe Leu Phe Ser Arg Thr
530 535 540

His Ser Leu Lys Pro Gln Phe Thr Pro Thr Glu Arg Glu Met Leu Ala
545 550 555 560

Ser Phe Phe Thr Leu Tyr Val Thr Leu Gly Gly Gly Met Leu Asn Trp
565 570 575

Ile Cys Arg Ala Thr Ala Met Tyr Leu Ala Ala Pro Tyr His Ser Arg
580 585 590

Ser Ala Tyr Ile Ala Val Cys Glu Ser Leu Pro Tyr Tyr Tyr Ile Pro
595 600 605

Val Asn Ser Asp Leu Leu Cys Asp Leu Glu Val Leu Leu Leu Gly Glu
610 615 620

Val Asp Leu Pro Thr Val Cys Glu Ser Tyr Ala Thr Ile Ala His Glu
625 630 635 640

Leu Thr Gly Tyr Glu Ala Val Arg Thr Ala Ala Thr Asn Phe Met Ile
645 650 655

Glu Phe Ala Asp Cys Tyr Lys Glu Ser Glu Thr Asp Leu Met Val Ser
660 665 670

Ala Tyr Leu Gly Ala Val Leu Leu Leu Gln Arg Val Leu Gly His Ala
675 680 685

Asn Leu Leu Leu Leu Leu Leu Ser Gly Ala Ala Leu Tyr Gly Gly Cys
690 695 700

Ser Ile Tyr Ile Pro Arg Gly Ile Leu Asp Ala Tyr Asn Thr Leu Met
705 710 715 720

Leu Ala Ala Ser Pro Leu Tyr Ala His Gln Thr Leu Thr Ser Phe Trp
725 730 735

Lys Asp Arg Asp Asp Ala Met Gln Thr Leu Gly Ile Arg Pro Thr Thr
740 745 750

Asp Val Leu Pro Lys Glu Gln Asp Arg Ile Val Gln Ala Ser Pro Ile
755 760 765

Glu Met Asn Phe Arg Phe Val Gly Leu Glu Thr Ile Tyr Pro Arg Glu
770 775 780

Gln Pro Ile Pro Ser Val Asp Leu Ala Glu Asn Leu Met Gln Tyr Arg
785 790 795 800

Asn Glu Ile Leu Gly Leu Asp Trp Lys Ser Val Ala Met His Leu Leu
805 810 815

Arg Lys Tyr

<210> 15
<211> 661
<212> PRT
<213> Varicella zoster

<400> 15

Met Phe Ser Arg Phe Ala Arg Ser Phe Ser Ser Asp Asp Arg Thr Arg
1 5 10 15

Lys Ser Tyr Asp Gly Ser Tyr Gln Ser Phe Asn Ala Gly Glu Arg Asp
20 25 30

Leu Pro Thr Pro Thr Arg Asp Trp Cys Ser Ile Ser Gln Arg Ile Thr
35 40 45

Ser Glu Arg Val Arg Asp Gly Cys Leu Ile Pro Thr Pro Gly Glu Ala
50 55 60

Leu Glu Thr Ala Val Lys Ala Leu Ser Glu Lys Thr Asp Ser Leu Thr
65 70 75 80

Ser Pro Val Leu Gln Ser Thr Glu Arg His Ser Val Leu Leu Gly Leu
85 90 95

His	His	Asn	Asn	Val	Pro	Glu	Ser	Leu	Val	Val	Ser	Cys	Met	Ser	Asn		
			100					105					110				
Asp	Val	His	Asp	Gly	Phe	Met	Gln	Arg	Tyr	Met	Glu	Thr	Ile	Gln	Arg		
		115					120					125					
Cys	Leu	Asp	Asp	Leu	Lys	Leu	Ser	Gly	Asp	Gly	Leu	Trp	Trp	Val	Tyr		
	130					135					140						
Glu	Asn	Thr	Tyr	Trp	Gln	Tyr	Leu	Lys	Tyr	Thr	Thr	Gly	Ala	Glu	Val		
145					150					155					160		
Pro	Val	Thr	Ser	Glu	Lys	Val	Asn	Lys	Lys	Ser	Lys	Ser	Thr	Val	Leu		
				165					170					175			
Leu	Phe	Ser	Ser	Val	Val	Ala	Asn	Lys	Pro	Ile	Ser	Arg	His	Pro	Phe		
			180					185					190				
Lys	Ser	Lys	Val	Ile	Asn	Ser	Asp	Tyr	Arg	Gly	Ile	Cys	Gln	Glu	Leu		
		195					200					205					
Arg	Glu	Ala	Leu	Gly	Ala	Val	Gln	Lys	Tyr	Met	Tyr	Phe	Met	Arg	Pro		
	210					215					220						
Asp	Asp	Pro	Thr	Asn	Pro	Ser	Pro	Asp	Thr	Arg	Ile	Arg	Val	Gln	Glu		
225					230					235					240		
Ile	Ala	Ala	Tyr	Thr	Ala	Thr	Gly	Tyr	Gly	Trp	Met	Leu	Trp	Phe	Leu		
				245					250					255			
Asp	Val	Val	Asp	Ala	Arg	Val	Cys	Arg	His	Leu	Lys	Leu	Gln	Phe	Arg		
			260					265					270				
Arg	Ile	Arg	Gly	Pro	Arg	Ala	Ser	Val	Ile	Pro	Asp	Asp	Leu	Leu	Arg		
		275					280					285					
Arg	His	Leu	Lys	Thr	Gly	Pro	Ala	Val	Ser	Ala	Gly	Thr	Gly	Val	Ala		
	290					295					300						
Phe	Ile	Leu	Ala	Ala	Thr	Thr	Ala	Ser	Ala	Leu	Thr	Ala	Leu	Leu	Arg		
305					310					315					320		
Ile	Ser	Val	Leu	Trp	Arg	Lys	Glu	Glu	Trp	Arg	Asp	Gly	Leu	Asn	Gly		
				325					330					335			

Thr Ala Ala Ala Ile Val Ala Ala Val Glu Leu Ile Thr Leu Leu His
 340 345 350

His His Phe Gln Tyr Leu Ile Asn Met Met Leu Ile Gly Tyr Ala Cys
 355 360 365

Trp Gly Asp Gly Gly Leu Asn Asp Pro Tyr Ile Leu Lys Ala Leu Arg
 370 375 380

Ala Gln Gly Arg Phe Leu Tyr Phe Ala Gly Gln Leu Val Arg Thr Met
 385 390 395 400

Ser Thr His Ser Trp Val Val Leu Glu Thr Ser Thr His Met Trp Phe
 405 410 415

Ser Arg Ala Val Ala Gln Ser Ile Leu Ala His Gly Gly Lys Pro Thr
 420 425 430

Lys Tyr Tyr Ala Gln Val Leu Ala Ala Ser Lys Arg Tyr Thr Pro Leu
 435 440 445

His Leu Arg Arg Ile Ser Glu Pro Ser Ser Val Ser Asp Gln Pro Tyr
 450 455 460

Ile Arg Phe Asn Arg Leu Gly Ser Pro Ile Gly Thr Gly Ile Gly Asn
 465 470 475 480

Leu Glu Cys Val Cys Leu Thr Gly Asn Tyr Leu Ser Asp Asp Val Asn
 485 490 495

Ala Ser Ser His Val Ile Asn Thr Glu Ala Pro Leu Asn Ser Ile Ala
 500 505 510

Pro Asp Thr Asn Arg Gln Arg Thr Ser Arg Val Leu Val Arg Pro Asp
 515 520 525

Thr Gly Leu Asp Val Thr Val Arg Lys Asn His Cys Leu Asp Ile Gly
 530 535 540

His Thr Asp Gly Ser Pro Val Asp Pro Thr Tyr Pro Asp His Tyr Thr
 545 550 555 560

Arg Ile Lys Ala Glu Tyr Glu Gly Pro Val Arg Asp Glu Ser Asn Thr
 565 570 575

Met Phe Asp Gln Arg Ser Asp Leu Arg His Ile Glu Thr Gln Ala Ser
580 585 590

Leu Asn Asp His Val Tyr Glu Asn Ile Pro Pro Lys Glu Val Gly Phe
595 600 605

Asn Ser Ser Ser Asp Leu Asp Val Asp Ser Leu Asn Gly Tyr Thr Ser
610 615 620

Gly Asp Met His Thr Asp Asp Asp Leu Ser Pro Asp Phe Ile Pro Asn
625 630 635 640

Asp Val Pro Val Arg Cys Lys Thr Thr Val Thr Phe Arg Lys Asn Thr
645 650 655

Pro Lys Ser His His
660

<210> 16
<211> 301
<212> PRT
<213> Varicella zoster

<400> 16

Met Gly Asp Leu Ser Cys Trp Thr Lys Val Pro Gly Phe Thr Leu Thr
1 5 10 15

Gly Glu Leu Gln Tyr Leu Lys Gln Val Asp Asp Ile Leu Arg Tyr Gly
20 25 30

Val Arg Lys Arg Asp Arg Thr Gly Ile Gly Thr Leu Ser Leu Phe Gly
35 40 45

Met Gln Ala Arg Tyr Asn Leu Arg Asn Glu Phe Pro Leu Leu Thr Thr
50 55 60

Lys Arg Val Phe Trp Arg Ala Val Val Glu Glu Leu Leu Trp Phe Ile
65 70 75 80

Arg Gly Ser Thr Asp Ser Lys Glu Leu Ala Ala Lys Asp Ile His Ile
85 90 95

Trp Asp Ile Tyr Gly Ser Ser Lys Phe Leu Asn Arg Asn Gly Phe His
100 105 110

Lys Arg His Thr Gly Asp Leu Gly Pro Ile Tyr Gly Phe Gln Trp Arg
164

115

120

125

His Phe Gly Ala Glu Tyr Lys Asp Cys Gln Ser Asn Tyr Leu Gln Gln
 130 135 140

Gly Ile Asp Gln Leu Gln Thr Val Ile Asp Thr Ile Lys Thr Asn Pro
 145 150 155 160

Glu Ser Arg Arg Met Ile Ile Ser Ser Trp Asn Pro Lys Asp Ile Pro
 165 170 175

Leu Met Val Leu Pro Pro Cys His Thr Leu Cys Gln Phe Tyr Val Ala
 180 185 190

Asn Gly Glu Leu Ser Cys Gln Val Tyr Gln Arg Ser Gly Asp Met Gly
 195 200 205

Leu Gly Val Pro Phe Asn Ile Ala Gly Tyr Ala Leu Leu Thr Tyr Ile
 210 215 220

Val Ala His Val Thr Gly Leu Lys Thr Gly Asp Leu Ile His Thr Met
 225 230 235 240

Gly Asp Ala His Ile Tyr Leu Asn His Ile Asp Ala Leu Lys Val Gln
 245 250 255

Leu Ala Arg Ser Pro Lys Pro Phe Pro Cys Leu Lys Ile Ile Arg Asn
 260 265 270

Val Thr Asp Ile Asn Asp Phe Lys Trp Asp Asp Phe Gln Leu Asp Gly
 275 280 285

Tyr Asn Pro His Pro Pro Leu Lys Met Glu Met Ala Leu
 290 295 300

<210> 17

<211> 455

<212> PRT

<213> Varicella zoster

<400> 17

Met Gly Leu Phe Gly Leu Thr Arg Phe Ile His Glu His Lys Leu Val
 1 5 10 15

Lys Pro Ser Ile Ile Ser Thr Pro Pro Gly Val Leu Thr Pro Val Ala
 20 25 30

165

Tyr Pro Glu Phe Leu Val Ala Phe Val Arg Cys Gln Thr Asp Leu His
 275 280 285

Thr Ser Asp Asn Leu Lys Ser Val Gln Gln Val Ile Gln Asp Thr Gly
 290 295 300

Leu Lys Val Pro His Gln Met Asp Thr Ser Thr Arg Ser Pro Thr Tyr
 305 310 315 320

Asp Ser Trp Arg His Gly Glu Val Phe Lys Ser Leu Thr Val Ala Thr
 325 330 335

Ser Gly Lys Thr Glu Asn Gly Val Ser Val Ser Lys Tyr Ala Ser Asn
 340 345 350

Arg Ser Glu Val Thr Val Asp Ala Ser Trp Ala Leu Asn Leu Leu Pro
 355 360 365

Pro Ser Ser Ser Pro Leu Asp Asn Leu Glu Arg Ala Phe Val Glu His
 370 375 380

Ile Ile Ala Val Val Thr Pro Leu Thr Arg Gly Arg Leu Lys Leu Met
 385 390 395 400

Lys Arg Val Asn Ile Met Gln Asn Thr Ala Asp Pro Tyr Met Val Ile
 405 410 415

Asn Thr Leu Tyr His Asn Leu Lys Gly Glu Lys Met Ala Arg Gln Tyr
 420 425 430

Ala Arg Ile Phe Lys Gln Phe Ile Pro Thr Pro Leu Pro Leu Asn Thr
 435 440 445

Val Leu Thr Lys Tyr Trp Asn
 450 455

<210> 18
 <211> 1038
 <212> PRT
 <213> Varicella zoster

<400> 18

Met Glu Glu Pro Ile Cys Tyr Asp Thr Gln Lys Leu Leu Asp Asp Leu
 1 5 10 15

Ser Asn Leu Lys Val Gln Glu Ala Asp Asn Glu Arg Pro Trp Ser Pro
 20 25 30

Glu Lys Thr Glu Ile Ala Arg Val Lys Val Val Lys Phe Leu Arg Ser
 35 40 45

Thr Gln Lys Ile Pro Ala Lys His Phe Ile Gln Ile Trp Glu Pro Leu
 50 55 60

His Ser Asn Ile Cys Phe Val Tyr Ser Asn Thr Phe Leu Ala Glu Ala
 65 70 75 80

Ala Phe Thr Ala Glu Asn Leu Pro Gly Leu Leu Phe Trp Arg Leu Asp
 85 90 95

Leu Asp Trp Thr Ile Glu Glu Pro Gly Asn Ser Leu Lys Ile Leu Thr
 100 105 110

Gln Leu Ser Ser Val Val Gln Asp Ser Glu Thr Leu His Arg Leu Ser
 115 120 125

Ala Asn Lys Leu Arg Thr Ser Ser Lys Phe Gly Pro Val Ser Ile His
 130 135 140

Phe Ile Ile Thr Asp Trp Ile Asn Met Tyr Glu Val Ala Leu Lys Asp
 145 150 155 160

Ala Thr Thr Ala Ile Glu Ser Pro Phe Thr His Ala Arg Ile Gly Met
 165 170 175

Leu Glu Ser Ala Ile Ala Ala Leu Thr Gln His Lys Phe Ala Ile Ile
 180 185 190

Tyr Asp Met Pro Phe Val Gln Glu Gly Ile Arg Val Leu Thr Gln Tyr
 195 200 205

Ala Gly Trp Leu Leu Pro Phe Asn Val Met Trp Asn Gln Ile Gln Asn
 210 215 220

Ser Ser Leu Thr Pro Leu Thr Arg Ala Leu Phe Ile Ile Cys Met Ile
 225 230 235 240

Asp Glu Tyr Leu Thr Glu Thr Pro Val His Ser Ile Ser Glu Leu Phe
 245 250 255

Ala Asp Thr Val Asn Leu Ile Lys Asp Glu Ala Phe Val Ser Ile Glu
 260 265 270

Glu Ala Val Thr Asn Pro Arg Thr Val His Glu Ser Arg Ile Ser Ser
 275 280 285

Ala Leu Ala Tyr Arg Asp Pro Tyr Val Phe Glu Thr Ser Pro Gly Met
 290 295 300

Leu Ala Arg Arg Leu Arg Leu Asp Asn Gly Ile Trp Glu Ser Asn Leu
 305 310 315 320

Leu Ser Leu Ser Thr Pro Gly Ile His Ile Glu Ala Leu Leu His Leu
 325 330 335

Leu Asn Ser Asp Pro Glu Ala Glu Thr Thr Ser Gly Ser Asn Val Ala
 340 345 350

Glu His Thr Arg Gly Ile Trp Glu Lys Val Gln Ala Ser Thr Ser Pro
 355 360 365

Ser Met Leu Ile Ser Thr Leu Ala Glu Ser Gly Phe Thr Arg Phe Ser
 370 375 380

Cys Lys Leu Leu Arg Arg Phe Ile Ala His His Thr Leu Ala Gly Phe
 385 390 395 400

Ile His Gly Ser Val Val Ala Asp Glu His Ile Thr Asp Phe Gln Gln
 405 410 415

Thr Leu Gly Cys Leu Ala Leu Val Gly Gly Leu Ala Tyr Gln Leu Val
 420 425 430

Glu Thr Tyr Ala Pro Thr Thr Glu Tyr Val Leu Thr Tyr Thr Arg Thr
 435 440 445

Val Asn Glu Thr Glu Lys Arg Tyr Glu Thr Leu Leu Pro Ala Leu Gly
 450 455 460

Leu Pro Pro Gly Gly Leu Gly Gln Ile Met Arg Arg Cys Phe Ala Pro
 465 470 475 480

Arg Pro Leu Ile Glu Ser Ile Gln Ala Thr Arg Val Ile Leu Leu Asn
 485 490 495

Glu Ile Ser His Ala Glu Ala Arg Glu Thr Thr Tyr Phe Lys Gln Thr
500 505 510

His Asn Gln Ser Ser Gly Ala Leu Leu Pro Gln Ala Gly Gln Ser Ala
515 520 525

Val Arg Glu Ala Val Leu Thr Trp Phe Asp Leu Arg Met Asp Ser Arg
530 535 540

Trp Gly Ile Thr Pro Pro Val Asp Val Gly Met Thr Pro Pro Ile Cys
545 550 555 560

Val Asp Pro Pro Ala Thr Gly Leu Glu Ala Val Met Ile Thr Glu Ala
565 570 575

Leu Lys Ile Ala Tyr Pro Thr Glu Tyr Asn Arg Ser Ser Val Phe Val
580 585 590

Glu Pro Ser Phe Val Pro Tyr Ile Ile Ala Thr Ser Thr Leu Asp Ala
595 600 605

Leu Ser Ala Thr Ile Ala Leu Ser Phe Asp Thr Arg Gly Ile Gln Gln
610 615 620

Ala Leu Ser Ile Leu Gln Trp Ala Arg Asp Tyr Gly Ser Gly Thr Val
625 630 635 640

Pro Asn Ala Asp Gly Tyr Arg Thr Lys Leu Ser Ala Leu Ile Thr Ile
645 650 655

Leu Glu Pro Phe Thr Arg Thr His Pro Pro Val Leu Leu Pro Ser His
660 665 670

Val Ser Thr Ile Asp Ser Leu Ile Cys Glu Leu His Arg Thr Val Gly
675 680 685

Ile Ala Val Asp Leu Leu Pro Gln His Val Arg Pro Leu Val Pro Asp
690 695 700

Arg Pro Ser Ile Thr Asn Ser Val Phe Leu Ala Thr Leu Tyr Tyr Asp
705 710 715 720

Glu Leu Tyr Gly Arg Trp Thr Arg Leu Asp Lys Thr Ser Gln Ala Leu
725 730 735

Val Glu Asn Phe Thr Ser Asn Ala Leu Val Val Ser Arg Tyr Met Leu
 740 745 750

Met Leu Gln Lys Phe Phe Ala Cys Arg Phe Tyr Pro Thr Pro Asp Leu
 755 760 765

Gln Ala Val Gly Ile Cys Asn Pro Lys Val Glu Arg Asp Glu Gln Phe
 770 775 780

Gly Val Trp Arg Leu Asn Asp Leu Ala Asp Ala Val Gly His Ile Val
 785 790 795 800

Gly Thr Ile Gln Gly Ile Arg Thr Gln Met Arg Val Gly Ile Ser Ser
 805 810 815

Leu Arg Thr Ile Met Ala Asp Ala Ser Ser Ala Leu Arg Glu Cys Glu
 820 825 830

Asn Leu Met Thr Lys Thr Ser Thr Ser Ala Ile Gly Pro Leu Phe Ser
 835 840 845

Thr Met Ala Ser Arg Tyr Ala Arg Phe Thr Gln Asp Gln Met Asp Ile
 850 855 860

Leu Met Arg Val Asp Lys Leu Thr Thr Gly Glu Asn Ile Pro Gly Leu
 865 870 875 880

Ala Asn Val Glu Ile Phe Leu Asn Arg Trp Glu Arg Ile Ala Thr Ala
 885 890 895

Cys Arg His Ala Thr Ala Val Pro Ser Ala Glu Ser Ile Ala Thr Val
 900 905 910

Cys Asn Glu Leu Arg Arg Gly Leu Lys Asn Ile Gln Glu Asp Arg Val
 915 920 925

Asn Ala Pro Thr Ser Tyr Met Ser His Ala Arg Asn Leu Glu Asp His
 930 935 940

Lys Ala Ala Val Ser Phe Val Met Asp Ser Arg Gln Gln Phe Ile Val
 945 950 955 960

Asp Ser Gly Pro Gln Met Gly Ala Val Leu Thr Ser Gln Cys Asn Ile
 965 970 975

Gly Thr Trp Glu Asn Val Asn Ala Thr Phe Leu His Asp Asn Val Lys
 980 985 990

Ile Thr Thr Thr Val Arg Asp Val Ile Ser Glu Ala Pro Thr Leu Ile
 995 1000 1005

Ile Gly Gln Arg Trp Leu Arg Pro Asp Glu Ile Leu Ser Asn Val
 1010 1015 1020

Asp Leu Arg Leu Gly Val Pro Gly Asn Thr Ser Gly Ser Asp Pro
 1025 1030 1035

<210> 19
 <211> 2763
 <212> PRT
 <213> Varicella zoster

<400> 19

Met Asp Ile Ile Pro Pro Ile Ala Val Thr Val Ala Gly Val Gly Ser
 1 5 10 15

Arg Asn Gln Phe Asp Gly Ala Leu Gly Pro Ala Ser Gly Leu Ser Cys
 20 25 30

Leu Arg Thr Ser Leu Ser Phe Leu His Met Thr Tyr Ala His Gly Ile
 35 40 45

Asn Ala Thr Leu Ser Ser Asp Met Ile Asp Gly Cys Leu Gln Glu Gly
 50 55 60

Ala Ala Trp Thr Thr Asp Leu Ser Asn Met Gly Arg Gly Val Pro Asp
 65 70 75 80

Met Cys Ala Leu Val Asp Leu Pro Asn Arg Ile Ser Tyr Ile Lys Leu
 85 90 95

Gly Asp Thr Thr Ser Thr Cys Cys Val Leu Ser Arg Ile Tyr Gly Asp
 100 105 110

Ser His Phe Phe Thr Val Pro Asp Glu Gly Phe Met Cys Thr Gln Ile
 115 120 125

Pro Ala Arg Ala Phe Phe Asp Asp Val Trp Met Gly Arg Glu Glu Ser
 130 135 140

Tyr Thr Ile Ile Thr Val Asp Ser Thr Gly Met Ala Ile Tyr Arg Gln
 145 150 155 160

Gly Asn Ile Ser Phe Ile Phe Asp Pro His Gly His Gly Thr Ile Gly
 165 170 175

Gln Ala Val Val Val Arg Val Asn Thr Thr Asp Val Tyr Ser Tyr Ile
 180 185 190

Ala Ser Glu Tyr Thr His Arg Pro Asp Asn Val Glu Ser Gln Trp Ala
 195 200 205

Ala Ala Leu Val Phe Phe Val Thr Ala Asn Asp Gly Pro Val Ser Glu
 210 215 220

Glu Ala Leu Ser Ser Ala Val Thr Leu Ile Tyr Gly Ser Cys Asp Thr
 225 230 235 240

Tyr Phe Thr Asp Glu Gln Tyr Cys Glu Lys Leu Val Thr Ala Gln His
 245 250 255

Pro Leu Leu Leu Ser Pro Pro Asn Ser Thr Thr Ile Val Leu Asn Lys
 260 265 270

Ser Ser Ile Val Pro Leu His Gln Asn Val Gly Glu Ser Val Ser Leu
 275 280 285

Glu Ala Thr Leu His Ser Thr Leu Thr Asn Thr Val Ala Leu Asp Pro
 290 295 300

Arg Cys Ser Tyr Ser Glu Val Asp Pro Trp His Ala Val Leu Glu Thr
 305 310 315 320

Thr Ser Thr Gly Ser Gly Val Leu Asp Cys Arg Arg Arg Arg Arg Pro
 325 330 335

Ser Trp Thr Pro Pro Ser Ser Glu Glu Asn Leu Ala Cys Ile Asp Asp
 340 345 350

Gly Leu Val Asn Asn Thr His Ser Thr Asp Asn Leu His Lys Pro Ala
 355 360 365

Lys Lys Val Leu Lys Phe Lys Pro Thr Val Asp Val Pro Asp Lys Thr
 370 375 380

Gln Val Ala His Val Leu Pro Arg Leu Arg Glu Val Ala Asn Thr Pro
 385 390 395 400

Asp Val Val Leu Asn Val Ser Asn Val Asp Thr Pro Glu Ser Ser Pro
 405 410 415

Thr Phe Ser Arg Asn Met Asn Val Gly Ser Ser Leu Lys Asp Arg Lys
 420 425 430

Pro Phe Leu Phe Glu Gln Ser Gly Asp Val Asn Met Val Val Glu Lys
 435 440 445

Leu Leu Gln His Gly His Glu Ile Ser Asn Gly Tyr Val Gln Asn Ala
 450 455 460

Val Gly Thr Leu Asp Thr Val Ile Thr Gly His Thr Asn Val Pro Ile
 465 470 475 480

Trp Val Thr Arg Pro Leu Val Met Pro Asp Glu Lys Asp Pro Leu Glu
 485 490 495

Leu Phe Ile Asn Leu Thr Ile Leu Arg Leu Thr Gly Phe Val Val Glu
 500 505 510

Asn Gly Thr Arg Thr His His Gly Ala Thr Ser Val Val Ser Asp Phe
 515 520 525

Ile Gly Pro Leu Gly Glu Ile Leu Thr Gly Phe Pro Ser Ala Ala Glu
 530 535 540

Leu Ile Arg Val Thr Ser Leu Ile Leu Thr Asn Met Pro Gly Ala Glu
 545 550 555 560

Tyr Ala Ile Lys Thr Val Leu Arg Lys Lys Cys Thr Ile Gly Met Leu
 565 570 575

Ile Ile Ala Lys Phe Gly Leu Val Ala Met Arg Val Gln Asp Thr Thr
 580 585 590

Gly Ala Leu His Ala Glu Leu Asp Val Leu Glu Ala Asp Leu Gly Gly
 595 600 605

Ser Ser Pro Ile Asp Leu Tyr Ser Arg Leu Ser Thr Gly Leu Ile Ser
 610 615 620

Ile	Leu	Asn	Ser	Pro	Ile	Ile	Ser	His	Pro	Gly	Leu	Phe	Ala	Glu	Leu	
625					630					635					640	
Ile	Pro	Thr	Arg	Thr	Gly	Ser	Leu	Ser	Glu	Arg	Ile	Arg	Leu	Leu	Cys	
				645					650					655		
Glu	Leu	Val	Ser	Ala	Arg	Glu	Thr	Arg	Tyr	Met	Arg	Glu	His	Thr	Ala	
			660					665					670			
Leu	Val	Ser	Ser	Val	Lys	Ala	Leu	Glu	Asn	Ala	Leu	Arg	Ser	Thr	Arg	
		675					680					685				
Asn	Lys	Ile	Asp	Ala	Ile	Gln	Ile	Pro	Glu	Val	Pro	Gln	Glu	Pro	Pro	
	690					695					700					
Glu	Glu	Thr	Asp	Ile	Pro	Pro	Glu	Glu	Leu	Ile	Arg	Arg	Val	Tyr	Glu	
705					710					715					720	
Ile	Arg	Ser	Glu	Val	Thr	Met	Leu	Leu	Thr	Ser	Ala	Val	Thr	Glu	Tyr	
				725					730					735		
Phe	Thr	Arg	Gly	Val	Leu	Tyr	Ser	Thr	Arg	Ala	Leu	Ile	Ala	Glu	Gln	
			740					745					750			
Ser	Pro	Arg	Arg	Phe	Arg	Val	Ala	Thr	Ala	Ser	Thr	Ala	Pro	Ile	Gln	
		755					760					765				
Arg	Leu	Leu	Asp	Ser	Leu	Pro	Glu	Phe	Asp	Ala	Lys	Leu	Thr	Ala	Ile	
	770					775					780					
Ile	Ser	Ser	Leu	Ser	Ile	His	Pro	Pro	Pro	Glu	Thr	Ile	Gln	Asn	Leu	
785					790					795					800	
Pro	Val	Val	Ser	Leu	Leu	Lys	Glu	Leu	Ile	Lys	Glu	Gly	Glu	Asp	Leu	
				805					810					815		
Asn	Thr	Asp	Thr	Ala	Leu	Val	Ser	Trp	Leu	Ser	Val	Val	Gly	Glu	Ala	
			820					825					830			
Gln	Thr	Ala	Gly	Tyr	Leu	Ser	Arg	Arg	Glu	Phe	Asp	Glu	Leu	Ser	Arg	
		835					840					845				
Thr	Ile	Lys	Thr	Ile	Asn	Thr	Arg	Ala	Thr	Gln	Arg	Ala	Ser	Ala	Glu	
	850					855					860					

Ala Glu Leu Ser Cys Phe Asn Thr Leu Ser Ala Ala Val Asp Gln Ala
 865 870 875 880

Val Lys Asp Tyr Glu Thr Tyr Asn Asn Gly Glu Val Lys Tyr Pro Glu
 885 890 895

Ile Thr Arg Asp Asp Leu Leu Ala Thr Ile Val Arg Ala Thr Asp Asp
 900 905 910

Leu Val Arg Gln Ile Lys Ile Leu Ser Asp Pro Met Ile Gln Ser Gly
 915 920 925

Leu Gln Pro Ser Ile Lys Arg Arg Leu Glu Thr Arg Leu Lys Glu Val
 930 935 940

Gln Thr Tyr Ala Asn Glu Ala Arg Thr Thr Gln Asp Thr Ile Lys Ser
 945 950 955 960

Arg Lys Gln Ala Ala Tyr Asn Lys Leu Gly Gly Leu Leu Arg Pro Val
 965 970 975

Thr Gly Phe Val Gly Leu Arg Ala Ala Val Asp Leu Leu Pro Glu Leu
 980 985 990

Ala Ser Glu Leu Asp Val Gln Gly Ala Leu Val Asn Leu Arg Thr Lys
 995 1000 1005

Val Leu Glu Ala Pro Val Glu Ile Arg Ser Gln Leu Thr Gly Asp
 1010 1015 1020

Phe Trp Ala Leu Phe Asn Gln Tyr Arg Asp Ile Leu Glu His Pro
 1025 1030 1035

Gly Asn Ala Arg Thr Ser Val Leu Gly Gly Leu Gly Ala Cys Phe
 1040 1045 1050

Thr Ala Ile Ile Glu Ile Val Pro Ile Pro Thr Glu Tyr Arg Pro
 1055 1060 1065

Ser Leu Leu Ala Phe Phe Gly Asp Val Ala Asp Val Leu Ala Ser
 1070 1075 1080

Asp Ile Ala Thr Val Ser Thr Asn Pro Glu Ser Glu Ser Ala Ile
 1085 1090 1095

Asn	Ala	Val	Val	Ala	Thr	Leu	Ser	Lys	Ala	Thr	Leu	Val	Ser	Ser
1100						1105					1110			
Thr	Val	Pro	Ala	Leu	Ser	Phe	Val	Leu	Ser	Leu	Tyr	Lys	Lys	Tyr
1115						1120					1125			
Gln	Ala	Leu	Gln	Gln	Glu	Ile	Thr	Asn	Thr	His	Lys	Leu	Thr	Glu
1130						1135					1140			
Leu	Gln	Lys	Gln	Leu	Gly	Asp	Asp	Phe	Ser	Thr	Leu	Ala	Val	Ser
1145						1150					1155			
Ser	Gly	His	Leu	Lys	Phe	Ile	Ser	Ser	Ser	Asn	Val	Asp	Asp	Tyr
1160						1165					1170			
Glu	Ile	Asn	Asp	Ala	Ile	Leu	Ser	Ile	Gln	Thr	Asn	Val	His	Ala
1175						1180					1185			
Leu	Met	Asp	Thr	Val	Lys	Leu	Val	Glu	Val	Glu	Leu	Gln	Lys	Leu
1190						1195					1200			
Pro	Pro	His	Cys	Ile	Ala	Gly	Thr	Ser	Thr	Leu	Ser	Arg	Val	Val
1205						1210					1215			
Lys	Asp	Leu	His	Lys	Leu	Val	Thr	Met	Ala	His	Glu	Lys	Lys	Glu
1220						1225					1230			
Gln	Ala	Lys	Val	Leu	Ile	Thr	Asp	Cys	Glu	Arg	Ala	His	Lys	Gln
1235						1240					1245			
Gln	Thr	Thr	Arg	Val	Leu	Tyr	Glu	Arg	Trp	Thr	Arg	Asp	Ile	Ile
1250						1255					1260			
Ala	Cys	Leu	Glu	Ala	Met	Glu	Thr	Arg	His	Ile	Phe	Asn	Gly	Thr
1265						1270					1275			
Glu	Leu	Ala	Arg	Leu	Arg	Asp	Met	Ala	Ala	Ala	Gly	Gly	Phe	Asp
1280						1285					1290			
Ile	His	Ala	Val	Tyr	Pro	Gln	Ala	Arg	Gln	Val	Val	Ala	Ala	Cys
1295						1300					1305			
Glu	Thr	Thr	Ala	Val	Thr	Ala	Leu	Asp	Thr	Val	Phe	Arg	His	Asn
1310						1315					1320			

Pro	Tyr	Thr	Pro	Glu	Asn	Thr	Asn	Ile	Pro	Pro	Pro	Leu	Ala	Leu
1325						1330					1335			
Leu	Arg	Gly	Leu	Thr	Trp	Phe	Asp	Asp	Phe	Ser	Ile	Thr	Ala	Pro
1340						1345					1350			
Val	Phe	Thr	Val	Met	Phe	Pro	Gly	Val	Ser	Ile	Glu	Gly	Leu	Leu
1355						1360					1365			
Leu	Leu	Met	Arg	Ile	Arg	Ala	Val	Val	Leu	Leu	Ser	Ala	Asp	Thr
1370						1375					1380			
Ser	Ile	Asn	Gly	Ile	Pro	Asn	Tyr	Arg	Asp	Met	Ile	Leu	Arg	Thr
1385						1390					1395			
Ser	Gly	Asp	Leu	Leu	Gln	Ile	Pro	Ala	Leu	Ala	Gly	Tyr	Val	Asp
1400						1405					1410			
Phe	Tyr	Thr	Arg	Ser	Tyr	Asp	Gln	Phe	Ile	Thr	Glu	Ser	Val	Thr
1415						1420					1425			
Leu	Ser	Glu	Leu	Arg	Ala	Asp	Ile	Arg	Gln	Ala	Ala	Gly	Ala	Lys
1430						1435					1440			
Leu	Thr	Glu	Ala	Asn	Lys	Ala	Leu	Glu	Glu	Val	Thr	His	Val	Arg
1445						1450					1455			
Ala	His	Glu	Thr	Ala	Lys	Leu	Ala	Leu	Lys	Glu	Gly	Val	Phe	Ile
1460						1465					1470			
Thr	Leu	Pro	Ser	Glu	Gly	Leu	Leu	Ile	Arg	Ala	Ile	Glu	Tyr	Phe
1475						1480					1485			
Thr	Thr	Phe	Asp	His	Lys	Arg	Phe	Ile	Gly	Thr	Ala	Tyr	Glu	Arg
1490						1495					1500			
Val	Leu	Gln	Thr	Met	Val	Asp	Arg	Asp	Leu	Lys	Glu	Ala	Asn	Ala
1505						1510					1515			
Glu	Leu	Ala	Gln	Phe	Arg	Met	Val	Cys	Gln	Ala	Thr	Lys	Asn	Arg
1520						1525					1530			
Ala	Ile	Gln	Ile	Leu	Gln	Asn	Ile	Val	Asp	Thr	Ala	Asn	Ala	Thr
1535						1540					1545			

Glu	Gln	Gln	Glu	Asp	Val	Asp	Phe	Thr	Asn	Leu	Lys	Thr	Leu	Leu
1550						1555					1560			
Lys	Leu	Thr	Pro	Pro	Pro	Lys	Thr	Ile	Ala	Leu	Ala	Ile	Asp	Arg
1565						1570					1575			
Ser	Thr	Ser	Val	Gln	Asp	Ile	Val	Thr	Gln	Phe	Ala	Leu	Leu	Leu
1580						1585					1590			
Gly	Arg	Leu	Glu	Glu	Glu	Thr	Gly	Thr	Leu	Asp	Ile	Gln	Ala	Val
1595						1600					1605			
Asp	Trp	Met	Tyr	Gln	Ala	Arg	Asn	Ile	Ile	Asp	Ser	His	Pro	Leu
1610						1615					1620			
Ser	Val	Arg	Ile	Asp	Gly	Thr	Gly	Pro	Leu	His	Thr	Tyr	Lys	Asp
1625						1630					1635			
Arg	Val	Asp	Lys	Leu	Tyr	Ala	Leu	Arg	Thr	Lys	Leu	Asp	Leu	Leu
1640						1645					1650			
Arg	Arg	Arg	Ile	Glu	Thr	Gly	Glu	Val	Thr	Trp	Asp	Asp	Ala	Trp
1655						1660					1665			
Thr	Thr	Phe	Lys	Arg	Glu	Thr	Gly	Asp	Met	Leu	Ala	Ser	Gly	Asp
1670						1675					1680			
Thr	Tyr	Ala	Thr	Ser	Val	Asp	Ser	Ile	Lys	Ala	Leu	Gln	Ala	Ser
1685						1690					1695			
Ala	Ser	Val	Val	Asp	Met	Leu	Cys	Ser	Glu	Pro	Glu	Phe	Phe	Leu
1700						1705					1710			
Leu	Pro	Val	Glu	Thr	Lys	Asn	Arg	Leu	Gln	Lys	Lys	Gln	Gln	Glu
1715						1720					1725			
Arg	Lys	Thr	Ala	Leu	Asp	Val	Val	Leu	Gln	Lys	Gln	Arg	Gln	Phe
1730						1735					1740			
Glu	Glu	Thr	Ala	Ser	Arg	Leu	Arg	Ala	Leu	Ile	Glu	Arg	Ile	Pro
1745						1750					1755			
Thr	Glu	Ser	Asp	His	Asp	Val	Leu	Arg	Met	Leu	Leu	Arg	Asp	Phe
1760						1765					1770			

Asp	Gln	Phe	Thr	His	Leu	Pro	Ile	Trp	Ile	Lys	Thr	Gln	Tyr	Met
1775						1780					1785			
Thr	Phe	Arg	Asn	Leu	Leu	Met	Val	Arg	Leu	Gly	Leu	Tyr	Ala	Ser
1790						1795					1800			
Tyr	Ala	Glu	Ile	Phe	Pro	Pro	Ala	Ser	Pro	Asn	Gly	Val	Phe	Ala
1805						1810					1815			
Pro	Ile	Pro	Ala	Met	Ser	Gly	Val	Cys	Leu	Glu	Asp	Gln	Ser	Arg
1820						1825					1830			
Cys	Ile	Arg	Ala	Arg	Val	Ala	Ala	Phe	Met	Gly	Glu	Ala	Ser	Val
1835						1840					1845			
Val	Gln	Thr	Phe	Arg	Glu	Ala	Arg	Ser	Ser	Ile	Asp	Ala	Leu	Phe
1850						1855					1860			
Gly	Lys	Asn	Leu	Thr	Phe	Tyr	Leu	Asp	Thr	Asp	Gly	Val	Pro	Leu
1865						1870					1875			
Arg	Tyr	Arg	Val	Cys	Tyr	Lys	Ser	Val	Gly	Val	Lys	Leu	Gly	Thr
1880						1885					1890			
Met	Leu	Cys	Ser	Gln	Gly	Gly	Leu	Ser	Leu	Arg	Pro	Ala	Leu	Pro
1895						1900					1905			
Asp	Glu	Gly	Ile	Val	Glu	Glu	Thr	Thr	Leu	Ser	Ala	Leu	Arg	Val
1910						1915					1920			
Ala	Asn	Glu	Val	Asn	Glu	Leu	Arg	Ile	Glu	Tyr	Glu	Ser	Ala	Ile
1925						1930					1935			
Lys	Ser	Gly	Phe	Ser	Ala	Phe	Ser	Thr	Phe	Val	Arg	His	Arg	His
1940						1945					1950			
Ala	Glu	Trp	Gly	Lys	Thr	Asn	Ala	Arg	Arg	Ala	Ile	Ala	Glu	Ile
1955						1960					1965			
Tyr	Ala	Gly	Leu	Ile	Thr	Thr	Thr	Leu	Thr	Arg	Gln	Tyr	Gly	Val
1970						1975					1980			
His	Trp	Asp	Lys	Leu	Ile	Tyr	Ser	Phe	Glu	Lys	His	His	Leu	Thr
1985						1990					1995			

Ser Val Met Gly Asn Gly Leu Thr Lys Pro Ile Gln Arg Arg Gly
 2000 2005 2010

 Asp Val Arg Val Leu Glu Leu Thr Leu Ser Asp Ile Val Thr Ile
 2015 2020 2025

 Leu Val Ala Thr Thr Pro Val His Leu Leu Asn Phe Ala Arg Leu
 2030 2035 2040

 Asp Leu Ile Lys Gln His Glu Tyr Met Ala Arg Thr Leu Arg Pro
 2045 2050 2055

 Val Ile Glu Ala Ala Phe Arg Gly Arg Leu Leu Val Arg Ser Leu
 2060 2065 2070

 Asp Gly Asp Pro Lys Gly Asn Ala Arg Ala Phe Phe Asn Ala Ala
 2075 2080 2085

 Pro Ser Lys His Lys Leu Pro Leu Ala Leu Gly Ser Asn Gln Asp
 2090 2095 2100

 Pro Thr Gly Gly Arg Ile Phe Ala Phe Arg Met Ala Asp Trp Lys
 2105 2110 2115

 Leu Val Lys Met Pro Gln Lys Ile Thr Asp Pro Phe Ala Pro Trp
 2120 2125 2130

 Gln Leu Ser Pro Pro Pro Gly Val Lys Ala Asn Val Asp Ala Val
 2135 2140 2145

 Thr Arg Ile Met Ala Thr Asp Arg Leu Ala Thr Ile Thr Val Leu
 2150 2155 2160

 Gly Arg Met Cys Leu Pro Pro Ile Ser Leu Val Ser Met Trp Asn
 2165 2170 2175

 Thr Leu Gln Pro Glu Glu Phe Ala Tyr Arg Thr Gln Asp Asp Val
 2180 2185 2190

 Asp Ile Ile Val Asp Ala Arg Leu Asp Leu Ser Ser Thr Leu Asn
 2195 2200 2205

 Ala Arg Phe Asp Thr Ala Pro Ser Asn Thr Thr Leu Glu Trp Asn
 2210 2215 2220

Thr	Asp	Arg	Lys	Val	Ile	Thr	Asp	Ala	Tyr	Ile	Gln	Thr	Gly	Ala
	2225					2230					2235			
Thr	Thr	Val	Phe	Thr	Val	Thr	Gly	Ala	Ala	Pro	Thr	His	Val	Ser
	2240					2245					2250			
Asn	Val	Thr	Ala	Phe	Asp	Ile	Ala	Thr	Thr	Ala	Ile	Leu	Phe	Gly
	2255					2260					2265			
Ala	Pro	Leu	Val	Ile	Ala	Met	Glu	Leu	Thr	Ser	Val	Phe	Ser	Gln
	2270					2275					2280			
Asn	Ser	Gly	Leu	Thr	Leu	Gly	Leu	Lys	Leu	Phe	Asp	Ser	Arg	His
	2285					2290					2295			
Met	Ala	Thr	Asp	Ser	Gly	Ile	Ser	Ser	Ala	Val	Ser	Pro	Asp	Ile
	2300					2305					2310			
Val	Ser	Trp	Gly	Leu	Arg	Leu	Leu	His	Met	Asp	Pro	His	Pro	Ile
	2315					2320					2325			
Glu	Asn	Ala	Cys	Leu	Ile	Val	Gln	Leu	Glu	Lys	Leu	Ser	Ala	Leu
	2330					2335					2340			
Ile	Ala	Asn	Lys	Pro	Leu	Thr	Asn	Asn	Pro	Pro	Cys	Leu	Leu	Leu
	2345					2350					2355			
Leu	Asp	Glu	His	Met	Asn	Pro	Ser	Tyr	Val	Leu	Trp	Glu	Arg	Lys
	2360					2365					2370			
Asp	Ser	Ile	Pro	Ala	Pro	Asp	Tyr	Val	Val	Phe	Trp	Gly	Pro	Glu
	2375					2380					2385			
Ser	Leu	Ile	Asp	Leu	Pro	Tyr	Ile	Asp	Ser	Asp	Glu	Asp	Ser	Phe
	2390					2395					2400			
Pro	Ser	Cys	Pro	Asp	Asp	Pro	Phe	Tyr	Ser	Gln	Ile	Ile	Ala	Gly
	2405					2410					2415			
Tyr	Ala	Pro	Gln	Gly	Pro	Pro	Asn	Leu	Asp	Thr	Thr	Asp	Phe	Tyr
	2420					2425					2430			
Pro	Thr	Glu	Pro	Leu	Phe	Lys	Ser	Pro	Val	Gln	Val	Val	Arg	Ser
	2435					2440					2445			

Ser	Lys	Cys	Lys	Lys	Met	Pro	Val	Arg	Pro	Ala	Gln	Pro	Ala	Gln
2450						2455					2460			
Pro	Ala	Gln	Pro	Ala	Gln	Pro	Ala	Gln	Thr	Val	Gln	Pro	Ala	Gln
2465						2470					2475			
Pro	Ile	Glu	Pro	Gly	Thr	Gln	Ile	Val	Val	Gln	Asn	Phe	Lys	Lys
2480						2485					2490			
Pro	Gln	Ser	Val	Lys	Thr	Thr	Leu	Ser	Gln	Lys	Asp	Ile	Pro	Leu
2495						2500					2505			
Tyr	Val	Glu	Thr	Glu	Ser	Glu	Thr	Ala	Val	Leu	Ile	Pro	Lys	Gln
2510						2515					2520			
Leu	Thr	Thr	Ser	Ile	Lys	Thr	Thr	Val	Cys	Lys	Ser	Ile	Thr	Pro
2525						2530					2535			
Pro	Asn	Asn	Gln	Leu	Ser	Asp	Trp	Lys	Asn	Asn	Pro	Gln	Gln	Asn
2540						2545					2550			
Gln	Thr	Leu	Asn	Gln	Ala	Phe	Ser	Lys	Pro	Ile	Leu	Glu	Ile	Thr
2555						2560					2565			
Ser	Ile	Pro	Thr	Asp	Asp	Ser	Ile	Ser	Tyr	Arg	Thr	Trp	Ile	Glu
2570						2575					2580			
Lys	Ser	Asn	Gln	Thr	Gln	Lys	Arg	His	Gln	Asn	Asp	Pro	Arg	Met
2585						2590					2595			
Tyr	Asn	Ser	Lys	Thr	Val	Phe	His	Pro	Val	Asn	Asn	Gln	Leu	Pro
2600						2605					2610			
Ser	Trp	Val	Asp	Thr	Ala	Ala	Asp	Ala	Pro	Gln	Thr	Asp	Leu	Leu
2615						2620					2625			
Thr	Asn	Tyr	Lys	Thr	Arg	Gln	Pro	Ser	Pro	Asn	Phe	Pro	Arg	Asp
2630						2635					2640			
Val	His	Thr	Trp	Gly	Val	Ser	Ser	Asn	Pro	Phe	Asn	Ser	Pro	Asn
2645						2650					2655			
Arg	Asp	Leu	Tyr	Gln	Ser	Asp	Phe	Ser	Glu	Pro	Ser	Asp	Gly	Tyr
2660						2665					2670			

Ser Ser Glu Ser Glu Asn Ser Ile Val Leu Ser Leu Asp Glu His
2675 2680 2685

Arg Ser Cys Arg Val Pro Arg His Val Arg Val Val Asn Ala Asp
2690 2695 2700

Val Val Thr Gly Arg Arg Tyr Val Arg Gly Thr Ala Leu Gly Ala
2705 2710 2715

Leu Ala Leu Leu Ser Gln Ala Cys Arg Arg Met Ile Asp Asn Val
2720 2725 2730

Arg Tyr Thr Arg Lys Leu Leu Met Asp His Thr Glu Asp Ile Phe
2735 2740 2745

Gln Gly Leu Gly Tyr Val Lys Leu Leu Leu Asp Gly Thr Tyr Ile
2750 2755 2760

<210> 20

<211> 585

<212> PRT

<213> Varicella zoster

<400> 20

Met Asp Arg Val Glu Ser Glu Glu Pro Met Asp Gly Phe Glu Ser Pro
1 5 10 15

Val Phe Ser Glu Asn Thr Ser Ser Asn Ser Gly Trp Cys Ser Asp Ala
20 25 30

Phe Ser Asp Ser Tyr Ile Ala Tyr Asn Pro Ala Leu Leu Leu Lys Asn
35 40 45

Asp Leu Leu Phe Ser Glu Leu Leu Phe Ala Ser His Leu Ile Asn Val
50 55 60

Pro Arg Ala Ile Glu Asn Asn Val Thr Tyr Glu Ala Ser Ser Ala Val
65 70 75 80

Gly Val Asp Asn Glu Met Thr Ser Ser Thr Thr Glu Phe Ile Glu Glu
85 90 95

Ile Gly Asp Val Leu Ala Leu Asp Arg Ala Cys Leu Val Cys Arg Thr
100 105 110

Leu Asp Leu Tyr Lys Arg Lys Phe Gly Leu Thr Pro Glu Trp Val Ala
184

115

120

125

Asp Tyr Ala Met Leu Cys Met Lys Ser Leu Ala Ser Pro Pro Cys Ala
 130 135 140

Val Val Thr Phe Ser Ala Ala Phe Glu Phe Val Tyr Leu Met Asp Arg
 145 150 155 160

Tyr Tyr Leu Cys Arg Tyr Asn Val Thr Leu Val Gly Ser Phe Ala Arg
 165 170 175

Arg Thr Leu Ser Leu Leu Asp Ile Gln Arg His Phe Phe Leu His Val
 180 185 190

Cys Phe Arg Thr Asp Gly Gly Leu Pro Gly Ile Arg Pro Pro Pro Gly
 195 200 205

Lys Glu Met Ala Asn Lys Val Arg Tyr Ser Asn Tyr Ser Phe Phe Val
 210 215 220

Gln Ala Val Val Arg Ala Ala Leu Leu Ser Ile Ser Thr Ser Arg Leu
 225 230 235 240

Asp Glu Thr Glu Thr Arg Lys Ser Phe Tyr Phe Asn Gln Asp Gly Leu
 245 250 255

Thr Gly Gly Pro Gln Pro Leu Ala Ala Ala Leu Ala Asn Trp Lys Asp
 260 265 270

Cys Ala Arg Met Val Asp Cys Ser Ser Ser Glu His Arg Thr Ser Gly
 275 280 285

Met Ile Thr Cys Ala Glu Arg Ala Leu Lys Glu Asp Ile Glu Phe Glu
 290 295 300

Asp Ile Leu Ile Asp Lys Leu Lys Lys Ser Ser Tyr Val Glu Ala Ala
 305 310 315 320

Trp Gly Tyr Ala Asp Leu Ala Leu Leu Leu Leu Ser Gly Val Ala Thr
 325 330 335

Trp Asn Val Asp Glu Arg Thr Asn Cys Ala Ile Glu Thr Arg Val Gly
 340 345 350

Cys Val Lys Ser Tyr Trp Gln Ala Asn Arg Ile Glu Asn Ser Arg Asp
 185

355

360

365

Val Pro Lys Gln Phe Ser Lys Phe Thr Ser Glu Asp Ala Cys Pro Glu
370 375 380

Val Ala Phe Gly Pro Ile Leu Leu Thr Thr Leu Lys Asn Ala Lys Cys
385 390 395 400

Arg Gly Arg Thr Asn Thr Glu Cys Met Leu Cys Cys Leu Leu Thr Ile
405 410 415

Gly His Tyr Trp Ile Ala Leu Arg Gln Phe Lys Arg Asp Ile Leu Ala
420 425 430

Tyr Ser Ala Asn Asn Thr Ser Leu Phe Asp Cys Ile Glu Pro Val Ile
435 440 445

Asn Ala Trp Ser Leu Asp Asn Pro Ile Lys Leu Lys Phe Pro Phe Asn
450 455 460

Asp Glu Gly Arg Phe Ile Thr Ile Val Lys Ala Ala Gly Ser Glu Ala
465 470 475 480

Val Tyr Lys His Leu Phe Cys Asp Leu Leu Cys Ala Leu Ser Glu Leu
485 490 495

Gln Thr Asn Pro Lys Ile Leu Phe Ala His Pro Thr Thr Ala Asp Lys
500 505 510

Glu Val Leu Glu Leu Tyr Lys Ala Gln Leu Ala Ala Gln Asn Arg Phe
515 520 525

Glu Gly Arg Val Cys Ala Gly Leu Trp Thr Leu Ala Tyr Ala Phe Lys
530 535 540

Ala Tyr Gln Ile Phe Pro Arg Lys Pro Thr Ala Asn Ala Ala Phe Ile
545 550 555 560

Arg Asp Gly Gly Leu Met Leu Arg Arg His Ala Ile Ser Leu Val Ser
565 570 575

Leu Glu His Thr Leu Ser Lys Tyr Val
580 585

<210> 21

<211> 1204
 <212> PRT
 <213> Varicella zoster

<400> 21

Met Glu Asn Thr Gln Lys Thr Val Thr Val Pro Thr Gly Pro Leu Gly
 1 5 10 15

Tyr Val Tyr Ala Cys Arg Val Glu Asp Leu Asp Leu Glu Glu Ile Ser
 20 25 30

Phe Leu Ala Ala Arg Ser Thr Asp Ser Asp Leu Ala Leu Leu Pro Leu
 35 40 45

Met Arg Asn Leu Thr Val Glu Lys Thr Phe Thr Ser Ser Leu Ala Val
 50 55 60

Val Ser Gly Ala Arg Thr Thr Gly Leu Ala Gly Ala Gly Ile Thr Leu
 65 70 75 80

Lys Leu Thr Thr Ser His Phe Tyr Pro Ser Val Phe Val Phe His Gly
 85 90 95

Gly Lys His Val Leu Pro Ser Ser Ala Ala Pro Asn Leu Thr Arg Ala
 100 105 110

Cys Asn Ala Ala Arg Glu Arg Phe Gly Phe Ser Arg Cys Gln Gly Pro
 115 120 125

Pro Val Asp Gly Ala Val Glu Thr Thr Gly Ala Glu Ile Cys Thr Arg
 130 135 140

Leu Gly Leu Glu Pro Glu Asn Thr Ile Leu Tyr Leu Val Val Thr Ala
 145 150 155 160

Leu Phe Lys Glu Ala Val Phe Met Cys Asn Val Phe Leu His Tyr Gly
 165 170 175

Gly Leu Asp Ile Val His Ile Asn His Gly Asp Val Ile Arg Ile Pro
 180 185 190

Leu Phe Pro Val Gln Leu Phe Met Pro Asp Val Asn Arg Leu Val Pro
 195 200 205

Asp Pro Phe Asn Thr His His Arg Ser Ile Gly Glu Gly Phe Val Tyr
 210 215 220

Pro	Thr	Pro	Phe	Tyr	Asn	Thr	Gly	Leu	Cys	His	Leu	Ile	His	Asp	Cys
225					230					235					240
Val	Ile	Ala	Pro	Met	Ala	Val	Ala	Leu	Arg	Val	Arg	Asn	Val	Thr	Ala
				245					250					255	
Val	Ala	Arg	Gly	Ala	Ala	His	Leu	Ala	Phe	Asp	Glu	Asn	His	Glu	Gly
			260					265					270		
Ala	Val	Leu	Pro	Pro	Asp	Ile	Thr	Tyr	Thr	Tyr	Phe	Gln	Ser	Ser	Ser
		275					280					285			
Ser	Gly	Thr	Thr	Thr	Ala	Arg	Gly	Ala	Arg	Arg	Asn	Asp	Val	Asn	Ser
	290					295					300				
Thr	Ser	Lys	Pro	Ser	Pro	Ser	Gly	Gly	Phe	Glu	Arg	Arg	Leu	Ala	Ser
305					310					315					320
Ile	Met	Ala	Ala	Asp	Thr	Ala	Leu	His	Ala	Glu	Val	Ile	Phe	Asn	Thr
				325					330					335	
Gly	Ile	Tyr	Glu	Glu	Thr	Pro	Thr	Asp	Ile	Lys	Glu	Trp	Pro	Met	Phe
			340					345					350		
Ile	Gly	Met	Glu	Gly	Thr	Leu	Pro	Arg	Leu	Asn	Ala	Leu	Gly	Ser	Tyr
		355					360					365			
Thr	Ala	Arg	Val	Ala	Gly	Val	Ile	Gly	Ala	Met	Val	Phe	Ser	Pro	Asn
	370					375					380				
Ser	Ala	Leu	Tyr	Leu	Thr	Glu	Val	Glu	Asp	Ser	Gly	Met	Thr	Glu	Ala
385					390					395					400
Lys	Asp	Gly	Gly	Pro	Gly	Pro	Ser	Phe	Asn	Arg	Phe	Tyr	Gln	Phe	Ala
				405					410					415	
Gly	Pro	His	Leu	Ala	Ala	Asn	Pro	Gln	Thr	Asp	Arg	Asp	Gly	His	Val
			420					425					430		
Leu	Ser	Ser	Gln	Ser	Thr	Gly	Ser	Ser	Asn	Thr	Glu	Phe	Ser	Val	Asp
		435					440					445			
Tyr	Leu	Ala	Leu	Ile	Cys	Gly	Phe	Gly	Ala	Pro	Leu	Leu	Ala	Arg	Leu
	450					455					460				

Leu Phe Tyr Leu Glu Arg Cys Asp Ala Gly Ala Phe Thr Gly Gly His
 465 470 475 480

Gly Asp Ala Leu Lys Tyr Val Thr Gly Thr Phe Asp Ser Glu Ile Pro
 485 490 495

Cys Ser Leu Cys Glu Lys His Thr Arg Pro Val Cys Ala His Thr Thr
 500 505 510

Val His Arg Leu Arg Gln Arg Met Pro Arg Phe Gly Gln Ala Thr Arg
 515 520 525

Gln Pro Ile Gly Val Phe Gly Thr Met Asn Ser Gln Tyr Ser Asp Cys
 530 535 540

Asp Pro Leu Gly Asn Tyr Ala Pro Tyr Leu Ile Leu Arg Lys Pro Gly
 545 550 555 560

Asp Gln Thr Glu Ala Ala Lys Ala Thr Met Gln Asp Thr Tyr Arg Ala
 565 570 575

Thr Leu Glu Arg Leu Phe Ile Asp Leu Glu Gln Glu Arg Leu Leu Asp
 580 585 590

Arg Gly Ala Pro Cys Ser Ser Glu Gly Leu Ser Ser Val Ile Val Asp
 595 600 605

His Pro Thr Phe Arg Arg Ile Leu Asp Thr Leu Arg Ala Arg Ile Glu
 610 615 620

Gln Thr Thr Thr Gln Phe Met Lys Val Leu Val Glu Thr Arg Asp Tyr
 625 630 635 640

Lys Ile Arg Glu Gly Leu Ser Glu Ala Thr His Ser Met Ala Leu Thr
 645 650 655

Phe Asp Pro Tyr Ser Gly Ala Phe Cys Pro Ile Thr Asn Phe Leu Val
 660 665 670

Lys Arg Thr His Leu Ala Val Val Gln Asp Leu Ala Leu Ser Gln Cys
 675 680 685

His Cys Val Phe Tyr Gly Gln Gln Val Glu Gly Arg Asn Phe Arg Asn
 690 695 700

Gln Phe Gln Pro Val Leu Arg Arg Arg Phe Val Asp Leu Phe Asn Gly
 705 710 715 720

Gly Phe Ile Ser Thr Arg Ser Ile Thr Val Thr Leu Ser Glu Gly Pro
 725 730 735

Val Ser Ala Pro Asn Pro Thr Leu Gly Gln Asp Ala Pro Ala Gly Arg
 740 745 750

Thr Phe Asp Gly Asp Leu Ala Arg Val Ser Val Glu Val Ile Arg Asp
 755 760 765

Ile Arg Val Lys Asn Arg Val Val Phe Ser Gly Asn Cys Thr Asn Leu
 770 775 780

Ser Glu Ala Ala Arg Ala Arg Leu Val Gly Leu Ala Ser Ala Tyr Gln
 785 790 795 800

Arg Gln Glu Lys Arg Val Asp Met Leu His Gly Ala Leu Gly Phe Leu
 805 810 815

Leu Lys Gln Phe His Gly Leu Leu Phe Pro Arg Gly Met Pro Pro Asn
 820 825 830

Ser Lys Ser Pro Asn Pro Gln Trp Phe Trp Thr Leu Leu Gln Arg Asn
 835 840 845

Gln Met Pro Ala Asp Lys Leu Thr His Glu Glu Ile Thr Thr Ile Ala
 850 855 860

Ala Val Lys Arg Phe Thr Glu Glu Tyr Ala Ala Ile Asn Phe Ile Asn
 865 870 875 880

Leu Pro Pro Thr Cys Ile Gly Glu Leu Ala Gln Phe Tyr Met Ala Asn
 885 890 895

Leu Ile Leu Lys Tyr Cys Asp His Ser Gln Tyr Leu Ile Asn Thr Leu
 900 905 910

Thr Ser Ile Ile Thr Gly Ala Arg Arg Pro Arg Asp Pro Ser Ser Val
 915 920 925

Leu His Trp Ile Arg Lys Asp Val Thr Ser Ala Ala Asp Ile Glu Thr
 930 935 940

Gln Ala Lys Ala Leu Leu Glu Lys Thr Glu Asn Leu Pro Glu Leu Trp
 945 950 955 960

Thr Thr Ala Phe Thr Ser Thr His Leu Val Arg Ala Ala Met Asn Gln
 965 970 975

Arg Pro Met Val Val Leu Gly Ile Ser Ile Ser Lys Tyr His Gly Ala
 980 985 990

Ala Gly Asn Asn Arg Val Phe Gln Ala Gly Asn Trp Ser Gly Leu Asn
 995 1000 1005

Gly Gly Lys Asn Val Cys Pro Leu Phe Thr Phe Asp Arg Thr Arg
 1010 1015 1020

Arg Phe Ile Ile Ala Cys Pro Arg Gly Gly Phe Ile Cys Pro Val
 1025 1030 1035

Thr Gly Pro Ser Ser Gly Asn Arg Glu Thr Thr Leu Ser Asp Gln
 1040 1045 1050

Val Arg Gly Ile Ile Val Ser Gly Gly Ala Met Val Gln Leu Ala
 1055 1060 1065

Ile Tyr Ala Thr Val Val Arg Ala Val Gly Ala Arg Ala Gln His
 1070 1075 1080

Met Ala Phe Asp Asp Trp Leu Ser Leu Thr Asp Asp Glu Phe Leu
 1085 1090 1095

Ala Arg Asp Leu Glu Glu Leu His Asp Gln Ile Ile Gln Thr Leu
 1100 1105 1110

Glu Thr Pro Trp Thr Val Glu Gly Ala Leu Glu Ala Val Lys Ile
 1115 1120 1125

Leu Asp Glu Lys Thr Thr Ala Gly Asp Gly Glu Thr Pro Thr Asn
 1130 1135 1140

Leu Ala Phe Asn Phe Asp Ser Cys Glu Pro Ser His Asp Thr Thr
 1145 1150 1155

Ser Asn Val Leu Asn Ile Ser Gly Ser Asn Ile Ser Gly Ser Thr
 1160 1165 1170

Val Pro Gly Leu Lys Arg Pro Pro Glu Asp Asp Glu Leu Phe Asp
 1175 1180 1185

Leu Ser Gly Ile Pro Ile Lys His Gly Asn Ile Thr Met Glu Met
 1190 1195 1200

Ile

<210> 22
 <211> 770
 <212> PRT
 <213> Varicella zoster

<400> 22

Met Glu Leu Asp Ile Asn Arg Thr Leu Leu Val Leu Leu Gly Gln Val
 1 5 10 15

Tyr Thr Tyr Ile Phe Gln Val Glu Leu Leu Arg Arg Cys Asp Pro Arg
 20 25 30

Val Ala Cys Arg Phe Leu Tyr Arg Leu Ala Ala Asn Cys Leu Thr Val
 35 40 45

Arg Tyr Leu Leu Lys Leu Phe Leu Arg Gly Phe Asn Thr Gln Leu Lys
 50 55 60

Phe Gly Asn Thr Pro Thr Val Cys Ala Leu His Trp Ala Leu Cys Tyr
 65 70 75 80

Val Lys Gly Glu Gly Glu Arg Leu Phe Glu Leu Leu Gln His Phe Lys
 85 90 95

Thr Arg Phe Val Tyr Gly Glu Thr Lys Asp Ser Asn Cys Ile Lys Asp
 100 105 110

Tyr Phe Val Ser Ala Phe Asn Leu Lys Thr Cys Gln Tyr His His Glu
 115 120 125

Leu Ser Leu Thr Thr Tyr Gly Gly Tyr Val Ser Ser Glu Ile Gln Phe
 130 135 140

Leu His Asp Ile Glu Asn Phe Leu Lys Gln Leu Asn Tyr Cys Tyr Ile
 145 150 155 160

Ile	Thr	Ser	Ser	Arg	Glu	Ala	Leu	Asn	Thr	Leu	Glu	Thr	Val	Thr	Arg	165	170	175	
Phe	Met	Thr	Asp	Thr	Ile	Gly	Ser	Gly	Leu	Ile	Pro	Pro	Val	Glu	Leu	180	185	190	
Phe	Asp	Pro	Ala	His	Pro	Cys	Ala	Ile	Cys	Phe	Glu	Glu	Leu	Cys	Ile	195	200	205	
Thr	Ala	Asn	Gln	Gly	Glu	Thr	Leu	His	Arg	Arg	Leu	Leu	Gly	Cys	Ile	210	215	220	
Cys	Asp	His	Val	Thr	Lys	Gln	Val	Arg	Val	Asn	Val	Asp	Val	Asp	Asp	225	230	235	240
Ile	Ile	Arg	Cys	Leu	Pro	Tyr	Ile	Pro	Asp	Val	Pro	Asp	Ile	Lys	Arg	245	250	255	
Gln	Ser	Ala	Val	Glu	Ala	Leu	Arg	Thr	Leu	Gln	Thr	Lys	Thr	Val	Val	260	265	270	
Asn	Pro	Met	Gly	Ala	Lys	Asn	Asp	Thr	Phe	Asp	Gln	Thr	Tyr	Glu	Ile	275	280	285	
Ala	Ser	Thr	Met	Leu	Asp	Ser	Tyr	Asn	Val	Phe	Lys	Pro	Ala	Pro	Arg	290	295	300	
Cys	Met	Tyr	Ala	Ile	Ser	Glu	Leu	Lys	Phe	Trp	Leu	Thr	Ser	Asn	Ser	305	310	315	320
Thr	Glu	Gly	Pro	Gln	Arg	Thr	Leu	Asp	Val	Phe	Val	Asp	Asn	Leu	Asp	325	330	335	
Val	Leu	Asn	Glu	His	Glu	Lys	His	Ala	Glu	Leu	Thr	Ala	Val	Thr	Val	340	345	350	
Glu	Leu	Ala	Leu	Phe	Gly	Lys	Thr	Pro	Ile	His	Phe	Asp	Arg	Ala	Phe	355	360	365	
Ser	Glu	Glu	Leu	Gly	Ser	Leu	Asp	Ala	Ile	Asp	Ser	Ile	Leu	Val	Gly	370	375	380	
Asn	Arg	Ser	Ser	Ser	Pro	Asp	Ser	Gln	Ile	Glu	Ala	Leu	Ile	Lys	Ala	385	390	395	400

Cys Tyr Ala His His Leu Ser Ser Pro Leu Met Arg His Ile Ser Asn
 405 410 415
 Pro Ser His Asp Asn Glu Ala Ala Leu Arg Gln Leu Leu Glu Arg Val
 420 425 430
 Gly Cys Glu Asp Asp Leu Thr Lys Glu Ala Ser Asp Ser Ala Thr Ala
 435 440 445
 Ser Glu Cys Asp Leu Asn Asp Asp Ser Ser Ile Thr Phe Ala Val His
 450 455 460
 Gly Trp Glu Asn Leu Leu Ser Lys Ala Lys Ile Asp Ala Ala Glu Arg
 465 470 475 480
 Lys Arg Val Tyr Leu Glu His Leu Ser Lys Arg Ser Leu Thr Ser Leu
 485 490 495
 Gly Arg Cys Ile Arg Glu Gln Arg Gln Glu Leu Glu Lys Thr Leu Arg
 500 505 510
 Val Asn Val Tyr Gly Glu Ala Leu Leu Gln Thr Phe Val Ser Met Gln
 515 520 525
 Asn Gly Phe Gly Ala Arg Asn Val Phe Leu Ala Lys Val Ser Gln Ala
 530 535 540
 Gly Cys Ile Ile Asp Asn Arg Ile Gln Glu Ala Ala Phe Asp Ala His
 545 550 555 560
 Arg Phe Ile Arg Asn Thr Leu Val Arg His Thr Val Asp Ala Ala Met
 565 570 575
 Leu Pro Ala Leu Thr His Lys Phe Phe Glu Leu Val Asn Gly Pro Leu
 580 585 590
 Phe Asn His Asp Glu His Arg Phe Ala Gln Pro Pro Asn Thr Ala Leu
 595 600 605
 Phe Phe Thr Val Glu Asn Val Gly Leu Phe Pro His Leu Lys Glu Glu
 610 615 620
 Leu Ala Lys Phe Met Gly Gly Val Val Gly Ser Asn Trp Leu Leu Ser
 625 630 635 640

Pro Phe Arg Gly Phe Tyr Cys Phe Ser Gly Val Glu Gly Val Thr Phe
645 650 655

Ala Gln Arg Leu Ala Trp Lys Tyr Ile Arg Glu Leu Val Phe Ala Thr
660 665 670

Thr Leu Phe Thr Ser Val Phe His Cys Gly Glu Val Arg Leu Cys Arg
675 680 685

Val Asp Arg Leu Gly Lys Asp Pro Arg Gly Cys Thr Ser Gln Pro Lys
690 695 700

Gly Ile Gly Ser Ser His Gly Pro Leu Asp Gly Ile Tyr Leu Thr Tyr
705 710 715 720

Glu Glu Thr Cys Pro Leu Val Ala Ile Ile Gln Ser Gly Glu Thr Gly
725 730 735

Ile Asp Gln Asn Thr Val Val Ile Tyr Asp Ser Asp Val Phe Ser Leu
740 745 750

Leu Tyr Thr Leu Met Gln Arg Leu Ala Pro Asp Ser Thr Asp Pro Ala
755 760 765

Phe Ser
770

<210> 23
<211> 868
<212> PRT
<213> Varicella zoster

<400> 23

Met Phe Val Thr Ala Val Val Ser Val Ser Pro Ser Ser Phe Tyr Glu
1 5 10 15

Ser Leu Gln Val Glu Pro Thr Gln Ser Glu Asp Ile Thr Arg Ser Ala
20 25 30

His Leu Gly Asp Gly Asp Glu Ile Arg Glu Ala Ile His Lys Ser Gln
35 40 45

Asp Ala Glu Thr Lys Pro Thr Phe Tyr Val Cys Pro Pro Pro Thr Gly
50 55 60

Ser	Thr	Ile	Val	Arg	Leu	Glu	Pro	Thr	Arg	Thr	Cys	Pro	Asp	Tyr	His	65	70	75				80
Leu	Gly	Lys	Asn	Phe	Thr	Glu	Gly	Ile	Ala	Val	Val	Tyr	Lys	Glu	Asn		85	90				95
Ile	Ala	Ala	Tyr	Lys	Phe	Lys	Ala	Thr	Val	Tyr	Tyr	Lys	Asp	Val	Ile		100	105				110
Val	Ser	Thr	Ala	Trp	Ala	Gly	Ser	Ser	Tyr	Thr	Gln	Ile	Thr	Asn	Arg		115	120				125
Tyr	Ala	Asp	Arg	Val	Pro	Ile	Pro	Val	Ser	Glu	Ile	Thr	Asp	Thr	Ile		130	135				140
Asp	Lys	Phe	Gly	Lys	Cys	Ser	Ser	Lys	Ala	Thr	Tyr	Val	Arg	Asn	Asn	145		150			155	160
His	Lys	Val	Glu	Ala	Phe	Asn	Glu	Asp	Lys	Asn	Pro	Gln	Asp	Met	Pro		165	170				175
Leu	Ile	Ala	Ser	Lys	Tyr	Asn	Ser	Val	Gly	Ser	Lys	Ala	Trp	His	Thr		180	185				190
Thr	Asn	Asp	Thr	Tyr	Met	Val	Ala	Gly	Thr	Pro	Gly	Thr	Tyr	Arg	Thr		195	200				205
Gly	Thr	Ser	Val	Asn	Cys	Ile	Ile	Glu	Glu	Val	Glu	Ala	Arg	Ser	Ile		210	215				220
Phe	Pro	Tyr	Asp	Ser	Phe	Gly	Leu	Ser	Thr	Gly	Asp	Ile	Ile	Tyr	Met	225		230			235	240
Ser	Pro	Phe	Phe	Gly	Leu	Arg	Asp	Gly	Ala	Tyr	Arg	Glu	His	Ser	Asn		245	250				255
Tyr	Ala	Met	Asp	Arg	Phe	His	Gln	Phe	Glu	Gly	Tyr	Arg	Gln	Arg	Asp		260	265				270
Leu	Asp	Thr	Arg	Ala	Leu	Leu	Glu	Pro	Ala	Ala	Arg	Asn	Phe	Leu	Val		275	280				285
Thr	Pro	His	Leu	Thr	Val	Gly	Trp	Asn	Trp	Lys	Pro	Lys	Arg	Thr	Glu		290	295				300

Val	Cys	Ser	Leu	Val	Lys	Trp	Arg	Glu	Val	Glu	Asp	Val	Val	Arg	Asp	
305					310					315					320	
Glu	Tyr	Ala	His	Asn	Phe	Arg	Phe	Thr	Met	Lys	Thr	Leu	Ser	Thr	Thr	
				325					330					335		
Phe	Ile	Ser	Glu	Thr	Asn	Glu	Phe	Asn	Leu	Asn	Gln	Ile	His	Leu	Ser	
			340					345					350			
Gln	Cys	Val	Lys	Glu	Glu	Ala	Arg	Ala	Ile	Ile	Asn	Arg	Ile	Tyr	Thr	
		355					360					365				
Thr	Arg	Tyr	Asn	Ser	Ser	His	Val	Arg	Thr	Gly	Asp	Ile	Gln	Thr	Tyr	
	370					375					380					
Leu	Ala	Arg	Gly	Gly	Phe	Val	Val	Val	Phe	Gln	Pro	Leu	Leu	Ser	Asn	
385					390					395					400	
Ser	Leu	Ala	Arg	Leu	Tyr	Leu	Gln	Glu	Leu	Val	Arg	Glu	Asn	Thr	Asn	
				405					410					415		
His	Ser	Pro	Gln	Lys	His	Pro	Thr	Arg	Asn	Thr	Arg	Ser	Arg	Arg	Ser	
			420					425					430			
Val	Pro	Val	Glu	Leu	Arg	Ala	Asn	Arg	Thr	Ile	Thr	Thr	Thr	Ser	Ser	
		435					440					445				
Val	Glu	Phe	Ala	Met	Leu	Gln	Phe	Thr	Tyr	Asp	His	Ile	Gln	Glu	His	
	450					455					460					
Val	Asn	Glu	Met	Leu	Ala	Arg	Ile	Ser	Ser	Ser	Trp	Cys	Gln	Leu	Gln	
465					470					475					480	
Asn	Arg	Glu	Arg	Ala	Leu	Trp	Ser	Gly	Leu	Phe	Pro	Ile	Asn	Pro	Ser	
				485					490					495		
Ala	Leu	Ala	Ser	Thr	Ile	Leu	Asp	Gln	Arg	Val	Lys	Ala	Arg	Ile	Leu	
			500					505					510			
Gly	Asp	Val	Ile	Ser	Val	Ser	Asn	Cys	Pro	Glu	Leu	Gly	Ser	Asp	Thr	
		515					520					525				
Arg	Ile	Ile	Leu	Gln	Asn	Ser	Met	Arg	Val	Ser	Gly	Ser	Thr	Thr	Arg	
	530					535					540					

Cys Tyr Ser Arg Pro Leu Ile Ser Ile Val Ser Leu Asn Gly Ser Gly
 545 550 555 560

Thr Val Glu Gly Gln Leu Gly Thr Asp Asn Glu Leu Ile Met Ser Arg
 565 570 575

Asp Leu Leu Glu Pro Cys Val Ala Asn His Lys Arg Tyr Phe Leu Phe
 580 585 590

Gly His His Tyr Val Tyr Tyr Glu Asp Tyr Arg Tyr Val Arg Glu Ile
 595 600 605

Ala Val His Asp Val Gly Met Ile Ser Thr Tyr Val Asp Leu Asn Leu
 610 615 620

Thr Leu Leu Lys Asp Arg Glu Phe Met Pro Leu Gln Val Tyr Thr Arg
 625 630 635 640

Asp Glu Leu Arg Asp Thr Gly Leu Leu Asp Tyr Ser Glu Ile Gln Arg
 645 650 655

Arg Asn Gln Met His Ser Leu Arg Phe Tyr Asp Ile Asp Lys Val Val
 660 665 670

Gln Tyr Asp Ser Gly Thr Ala Ile Met Gln Gly Met Ala Gln Phe Phe
 675 680 685

Gln Gly Leu Gly Thr Ala Gly Gln Ala Val Gly His Val Val Leu Gly
 690 695 700

Ala Thr Gly Ala Leu Leu Ser Thr Val His Gly Phe Thr Thr Phe Leu
 705 710 715 720

Ser Asn Pro Phe Gly Ala Leu Ala Val Gly Leu Leu Val Leu Ala Gly
 725 730 735

Leu Val Ala Ala Phe Phe Ala Tyr Arg Tyr Val Leu Lys Leu Lys Thr
 740 745 750

Ser Pro Met Lys Ala Leu Tyr Pro Leu Thr Thr Lys Gly Leu Lys Gln
 755 760 765

Leu Pro Glu Gly Met Asp Pro Phe Ala Glu Lys Pro Asn Ala Thr Asp
 770 775 780

Thr Pro Ile Glu Glu Ile Gly Asp Ser Gln Asn Thr Glu Pro Ser Val
785 790 795 800

Asn Ser Gly Phe Asp Pro Asp Lys Phe Arg Glu Ala Gln Glu Met Ile
805 810 815

Lys Tyr Met Thr Leu Val Ser Ala Ala Glu Arg Gln Glu Ser Lys Ala
820 825 830

Arg Lys Lys Asn Lys Thr Ser Ala Leu Leu Thr Ser Arg Leu Thr Gly
835 840 845

Leu Ala Leu Arg Asn Arg Arg Gly Tyr Ser Arg Val Arg Thr Glu Asn
850 855 860

Val Thr Gly Val
865

<210> 24
<211> 143
<212> PRT
<213> Varicella zoster

<400> 24

Met Glu Ser Ser Asn Ile Asn Ala Leu Gln Gln Pro Ser Ser Ile Ala
1 5 10 15

His His Pro Ser Lys Gln Cys Ala Ser Ser Leu Asn Glu Thr Val Lys
20 25 30

Asp Ser Pro Pro Ala Ile Tyr Glu Asp Arg Leu Glu His Thr Pro Val
35 40 45

Gln Leu Pro Arg Asp Gly Thr Pro Arg Asp Val Cys Ser Val Gly Gln
50 55 60

Leu Thr Cys Arg Ala Cys Ala Thr Lys Pro Phe Arg Leu Asn Arg Asp
65 70 75 80

Ser Gln Tyr Asp Tyr Leu Asn Thr Cys Pro Gly Gly Arg His Ile Ser
85 90 95

Leu Ala Leu Glu Ile Ile Thr Gly Arg Trp Val Cys Ile Pro Arg Val
100 105 110

Phe Pro Asp Thr Pro Glu Glu Lys Trp Met Ala Pro Tyr Ile Ile Pro
199

115

120

125

Asp Arg Glu Gln Pro Ser Ser Gly Asp Glu Asp Ser Asp Thr Asp
 130 135 140

<210> 25

<211> 341

<212> PRT

<213> Varicella zoster

<400> 25

Met Ser Thr Asp Lys Thr Asp Val Lys Met Gly Val Leu Arg Ile Tyr
 1 5 10 15

Leu Asp Gly Ala Tyr Gly Ile Gly Lys Thr Thr Ala Ala Glu Glu Phe
 20 25 30

Leu His His Phe Ala Ile Thr Pro Asn Arg Ile Leu Leu Ile Gly Glu
 35 40 45

Pro Leu Ser Tyr Trp Arg Asn Leu Ala Gly Glu Asp Ala Ile Cys Gly
 50 55 60

Ile Tyr Gly Thr Gln Thr Arg Arg Leu Asn Gly Asp Val Ser Pro Glu
 65 70 75 80

Asp Ala Gln Arg Leu Thr Ala His Phe Gln Ser Leu Phe Cys Ser Pro
 85 90 95

His Ala Ile Met His Ala Lys Ile Ser Ala Leu Met Asp Thr Ser Thr
 100 105 110

Ser Asp Leu Val Gln Val Asn Lys Glu Pro Tyr Lys Ile Met Leu Ser
 115 120 125

Asp Arg His Pro Ile Ala Ser Thr Ile Cys Phe Pro Leu Ser Arg Tyr
 130 135 140

Leu Val Gly Asp Met Ser Pro Ala Ala Leu Pro Gly Leu Leu Phe Thr
 145 150 155 160

Leu Pro Ala Glu Pro Pro Gly Thr Asn Leu Val Val Cys Thr Val Ser
 165 170 175

Leu Pro Ser His Leu Ser Arg Val Ser Lys Arg Ala Arg Pro Gly Glu
 180 185 190

200

Thr Val Asn Leu Pro Phe Val Met Val Leu Arg Asn Val Tyr Ile Met
195 200 205

Leu Ile Asn Thr Ile Ile Phe Leu Lys Thr Asn Asn Trp His Ala Gly
210 215 220

Trp Asn Thr Leu Ser Phe Cys Asn Asp Val Phe Lys Gln Lys Leu Gln
225 230 235 240

Lys Ser Glu Cys Ile Lys Leu Arg Glu Val Pro Gly Ile Glu Asp Thr
245 250 255

Leu Phe Ala Val Leu Lys Leu Pro Glu Leu Cys Gly Glu Phe Gly Asn
260 265 270

Ile Leu Pro Leu Trp Ala Trp Gly Met Glu Thr Leu Ser Asn Cys Ser
275 280 285

Arg Ser Met Ser Pro Phe Val Leu Ser Leu Glu Gln Thr Pro Gln His
290 295 300

Ala Ala Gln Glu Leu Lys Thr Leu Leu Pro Gln Met Thr Pro Ala Asn
305 310 315 320

Met Ser Ser Gly Ala Trp Asn Ile Leu Lys Glu Leu Val Asn Ala Val
325 330 335

Gln Asp Asn Thr Ser
340

<210> 26
<211> 841
<212> PRT
<213> Varicella zoster

<400> 26

Met Phe Ala Leu Val Leu Ala Val Val Ile Leu Pro Leu Trp Thr Thr
1 5 10 15

Ala Asn Lys Ser Tyr Val Thr Pro Thr Pro Ala Thr Arg Ser Ile Gly
20 25 30

His Met Ser Ala Leu Leu Arg Glu Tyr Ser Asp Arg Asn Met Ser Leu
35 40 45

Lys Leu Glu Ala Phe Tyr Pro Thr Gly Phe Asp Glu Glu Leu Ile Lys
 50 55 60

Ser Leu His Trp Gly Asn Asp Arg Lys His Val Phe Leu Val Ile Val
 65 70 75 80

Lys Val Asn Pro Thr Thr His Glu Gly Asp Val Gly Leu Val Ile Phe
 85 90 95

Pro Lys Tyr Leu Leu Ser Pro Tyr His Phe Lys Ala Glu His Arg Ala
 100 105 110

Pro Phe Pro Ala Gly Arg Phe Gly Phe Leu Ser His Pro Val Thr Pro
 115 120 125

Asp Val Ser Phe Phe Asp Ser Ser Phe Ala Pro Tyr Leu Thr Thr Gln
 130 135 140

His Leu Val Ala Phe Thr Thr Phe Pro Pro Asn Pro Leu Val Trp His
 145 150 155 160

Leu Glu Arg Ala Glu Thr Ala Ala Thr Ala Glu Arg Pro Phe Gly Val
 165 170 175

Ser Leu Leu Pro Ala Arg Pro Thr Val Pro Lys Asn Thr Ile Leu Glu
 180 185 190

His Lys Ala His Phe Ala Thr Trp Asp Ala Leu Ala Arg His Thr Phe
 195 200 205

Phe Ser Ala Glu Ala Ile Ile Thr Asn Ser Thr Leu Arg Ile His Val
 210 215 220

Pro Leu Phe Gly Ser Val Trp Pro Ile Arg Tyr Trp Ala Thr Gly Ser
 225 230 235 240

Val Leu Leu Thr Ser Asp Ser Gly Arg Val Glu Val Asn Ile Gly Val
 245 250 255

Gly Phe Met Ser Ser Leu Ile Ser Leu Ser Ser Gly Pro Pro Ile Glu
 260 265 270

Leu Ile Val Val Pro His Thr Val Lys Leu Asn Ala Val Thr Ser Asp
 275 280 285

Thr Thr Trp Phe Gln Leu Asn Pro Pro Gly Pro Asp Pro Gly Pro Ser
 290 295 300

Tyr Arg Val Tyr Leu Leu Gly Arg Gly Leu Asp Met Asn Phe Ser Lys
 305 310 315 320

His Ala Thr Val Asp Ile Cys Ala Tyr Pro Glu Glu Ser Leu Asp Tyr
 325 330 335

Arg Tyr His Leu Ser Met Ala His Thr Glu Ala Leu Arg Met Thr Thr
 340 345 350

Lys Ala Asp Gln His Asp Ile Asn Glu Glu Ser Tyr Tyr His Ile Ala
 355 360 365

Ala Arg Ile Ala Thr Ser Ile Phe Ala Leu Ser Glu Met Gly Arg Thr
 370 375 380

Thr Glu Tyr Phe Leu Leu Asp Glu Ile Val Asp Val Gln Tyr Gln Leu
 385 390 395 400

Lys Phe Leu Asn Tyr Ile Leu Met Arg Ile Gly Ala Gly Ala His Pro
 405 410 415

Asn Thr Ile Ser Gly Thr Ser Asp Leu Ile Phe Ala Asp Pro Ser Gln
 420 425 430

Leu His Asp Glu Leu Ser Leu Leu Phe Gly Gln Val Lys Pro Ala Asn
 435 440 445

Val Asp Tyr Phe Ile Ser Tyr Asp Glu Ala Arg Asp Gln Leu Lys Thr
 450 455 460

Ala Tyr Ala Leu Ser Arg Gly Gln Asp His Val Asn Ala Leu Ser Leu
 465 470 475 480

Ala Arg Arg Val Ile Met Ser Ile Tyr Lys Gly Leu Leu Val Lys Gln
 485 490 495

Asn Leu Asn Ala Thr Glu Arg Gln Ala Leu Phe Phe Ala Ser Met Ile
 500 505 510

Leu Leu Asn Phe Arg Glu Gly Leu Glu Asn Ser Ser Arg Val Leu Asp
 515 520 525

Gly Arg Thr Thr Leu Leu Leu Met Thr Ser Met Cys Thr Ala Ala His
530 535 540

Ala Thr Gln Ala Ala Leu Asn Ile Gln Glu Gly Leu Ala Tyr Leu Asn
545 550 555 560

Pro Ser Lys His Met Phe Thr Ile Pro Asn Val Tyr Ser Pro Cys Met
565 570 575

Gly Ser Leu Arg Thr Asp Leu Thr Glu Glu Ile His Val Met Asn Leu
580 585 590

Leu Ser Ala Ile Pro Thr Arg Pro Gly Leu Asn Glu Val Leu His Thr
595 600 605

Gln Leu Asp Glu Ser Glu Ile Phe Asp Ala Ala Phe Lys Thr Met Met
610 615 620

Ile Phe Thr Thr Trp Thr Ala Lys Asp Leu His Ile Leu His Thr His
625 630 635 640

Val Pro Glu Val Phe Thr Cys Gln Asp Ala Ala Ala Arg Asn Gly Glu
645 650 655

Tyr Val Leu Ile Leu Pro Ala Val Gln Gly His Ser Tyr Val Ile Thr
660 665 670

Arg Asn Lys Pro Gln Arg Gly Leu Val Tyr Ser Leu Ala Asp Val Asp
675 680 685

Val Tyr Asn Pro Ile Ser Val Val Tyr Leu Ser Arg Asp Thr Cys Val
690 695 700

Ser Glu His Gly Val Ile Glu Thr Val Ala Leu Pro His Pro Asp Asn
705 710 715 720

Leu Lys Glu Cys Leu Tyr Cys Gly Ser Val Phe Leu Arg Tyr Leu Thr
725 730 735

Thr Gly Ala Ile Met Asp Ile Ile Ile Ile Asp Ser Lys Asp Thr Glu
740 745 750

Arg Gln Leu Ala Ala Met Gly Asn Ser Thr Ile Pro Pro Phe Asn Pro
755 760 765

Asp Met His Gly Asp Asp Ser Lys Ala Val Leu Leu Phe Pro Asn Gly
770 775 780

Thr Val Val Thr Leu Leu Gly Phe Glu Arg Arg Gln Ala Ile Arg Met
785 790 795 800

Ser Gly Gln Tyr Leu Gly Ala Ser Leu Gly Gly Ala Phe Leu Ala Val
805 810 815

Val Gly Phe Gly Ile Ile Gly Trp Met Leu Cys Gly Asn Ser Arg Leu
820 825 830

Arg Glu Tyr Asn Lys Ile Pro Leu Thr
835 840

<210> 27
<211> 240
<212> PRT
<213> Varicella zoster

<400> 27

Met Asn Pro Pro Gln Ala Arg Val Ser Glu Gln Thr Lys Asp Leu Leu
1 5 10 15

Ser Val Met Val Asn Gln His Pro Glu Glu Asp Ala Lys Val Cys Lys
20 25 30

Ser Ser Asp Asn Ser Pro Leu Tyr Asn Thr Met Val Met Leu Ser Tyr
35 40 45

Gly Gly Asp Thr Asp Leu Leu Leu Ser Ser Ala Cys Thr Arg Thr Ser
50 55 60

Thr Val Asn Arg Ser Ala Phe Thr Gln His Ser Val Phe Tyr Ile Ile
65 70 75 80

Ser Thr Val Leu Ile Gln Pro Ile Cys Cys Ile Phe Phe Phe Phe Tyr
85 90 95

Tyr Lys Ala Thr Arg Cys Met Leu Leu Phe Thr Ala Gly Leu Leu Leu
100 105 110

Thr Ile Leu His His Phe Arg Leu Ile Ile Met Leu Leu Cys Val Tyr
115 120 125

Arg Asn Ile Arg Ser Asp Leu Leu Pro Leu Ser Thr Ser Gln Gln Leu
130 135 140

Leu Leu Gly Ile Ile Val Val Thr Arg Thr Met Leu Phe Cys Ile Thr
145 150 155 160

Ala Tyr Tyr Thr Leu Phe Ile Asp Thr Arg Val Phe Phe Leu Ile Thr
165 170 175

Gly His Leu Gln Ser Glu Val Ile Phe Pro Asp Ser Val Ser Lys Ile
180 185 190

Leu Pro Val Ser Trp Gly Pro Ser Pro Ala Val Leu Leu Val Met Ala
195 200 205

Ala Val Ile Tyr Ala Met Asp Cys Leu Val Asp Thr Val Ser Phe Ile
210 215 220

Gly Pro Arg Val Trp Val Arg Val Met Leu Lys Thr Ser Ile Ser Phe
225 230 235 240

<210> 28
<211> 1396
<212> PRT
<213> Varicella zoster

<400> 28

Met Thr Thr Val Ser Cys Pro Ala Asn Val Ile Thr Thr Thr Glu Ser
1 5 10 15

Asp Arg Ile Ala Gly Leu Phe Asn Ile Pro Ala Gly Ile Ile Pro Thr
20 25 30

Gly Asn Val Leu Ser Thr Ile Glu Val Cys Ala His Arg Cys Ile Phe
35 40 45

Asp Phe Phe Lys Gln Ile Arg Ser Asp Asp Asn Ser Leu Tyr Ser Ala
50 55 60

Gln Phe Asp Ile Leu Leu Gly Thr Tyr Cys Asn Thr Leu Asn Phe Val
65 70 75 80

Arg Phe Leu Glu Leu Gly Leu Ser Val Ala Cys Ile Cys Thr Lys Phe
85 90 95

Pro Glu Leu Ala Tyr Val Arg Asp Gly Val Ile Gln Phe Glu Val Gln
206

			100					105					110			
Gln	Pro	Met 115	Ile	Ala	Arg	Asp	Gly 120	Pro	His	Pro	Val	Asp 125	Gln	Pro	Val	
His	Asn 130	Tyr	Met	Val	Lys	Arg 135	Ile	His	Lys	Arg	Ser 140	Leu	Ser	Ala	Ala	
Phe 145	Ala	Ile	Ala	Ser	Glu 150	Ala	Leu	Ser	Leu	Leu 155	Ser	Asn	Thr	Tyr	Val 160	
Asp	Gly	Thr	Glu	Ile 165	Asp	Ser	Ser	Leu	Arg 170	Ile	Arg	Ala	Ile	Gln 175	Gln	
Met	Ala	Arg	Asn 180	Leu	Arg	Thr	Val	Leu 185	Asp	Ser	Phe	Glu	Arg 190	Gly	Thr	
Ala	Asp	Gln 195	Leu	Leu	Gly	Val	Leu 200	Leu	Glu	Lys	Ala	Pro 205	Pro	Leu	Ser	
Leu 210	Leu	Ser	Pro	Ile	Asn	Lys 215	Phe	Gln	Pro	Glu	Gly 220	His	Leu	Asn	Arg	
Val 225	Ala	Arg	Ala	Ala	Leu 230	Leu	Ser	Asp	Leu	Lys 235	Arg	Arg	Val	Cys	Ala 240	
Asp	Met	Phe	Phe	Met 245	Thr	Arg	His	Ala	Arg 250	Glu	Pro	Arg	Leu	Ile 255	Ser	
Ala	Tyr	Leu	Ser 260	Asp	Met	Val	Ser	Cys 265	Thr	Gln	Pro	Ser	Val 270	Met	Val	
Ser	Arg	Ile 275	Thr	His	Thr	Asn	Thr 280	Arg	Gly	Arg	Gln	Val 285	Asp	Gly	Val	
Leu 290	Val	Thr	Thr	Ala	Thr	Leu 295	Lys	Arg	Gln	Leu	Leu 300	Gln	Gly	Ile	Leu	
Gln 305	Ile	Asp	Asp	Thr	Ala 310	Ala	Asp	Val	Pro	Val 315	Thr	Tyr	Gly	Glu	Met 320	
Val	Leu	Gln	Gly	Thr 325	Asn	Leu	Val	Thr	Ala 330	Leu	Val	Met	Gly	Lys 335	Ala	
Val	Arg	Gly	Met	Asp	Asp	Val	Ala	Arg	His	Leu	Leu	Asp	Ile	Thr	Asp	

340

345

350

Pro Asn Thr Leu Asn Ile Pro Ser Ile Pro Pro Gln Ser Asn Ser Asp
 355 360 365

Ser Thr Thr Ala Gly Leu Pro Val Asn Ala Arg Val Pro Ala Asp Leu
 370 375 380

Val Ile Val Gly Asp Lys Leu Val Phe Leu Glu Ala Leu Glu Arg Arg
 385 390 395 400

Val Tyr Gln Ala Thr Arg Val Ala Tyr Pro Leu Ile Gly Asn Ile Asp
 405 410 415

Ile Thr Phe Ile Met Pro Met Gly Val Phe Gln Ala Asn Ser Met Asp
 420 425 430

Arg Tyr Thr Arg His Ala Gly Asp Phe Ser Thr Val Ser Glu Gln Asp
 435 440 445

Pro Arg Gln Phe Pro Pro Gln Gly Ile Phe Phe Tyr Asn Lys Asp Gly
 450 455 460

Ile Leu Thr Gln Leu Thr Leu Arg Asp Ala Met Gly Thr Ile Cys His
 465 470 475 480

Ser Ser Leu Leu Asp Val Glu Ala Thr Leu Val Ala Leu Arg Gln Gln
 485 490 495

His Leu Asp Arg Gln Cys Tyr Phe Gly Val Tyr Val Ala Glu Gly Thr
 500 505 510

Glu Asp Thr Leu Asp Val Gln Met Gly Arg Phe Met Glu Thr Trp Ala
 515 520 525

Asp Met Met Pro His His Pro His Trp Val Asn Glu His Leu Thr Ile
 530 535 540

Leu Gln Phe Ile Ala Pro Ser Asn Pro Arg Leu Arg Phe Glu Leu Asn
 545 550 555 560

Pro Ala Phe Asp Phe Phe Val Ala Pro Gly Asp Val Asp Leu Pro Gly
 565 570 575

Pro Gln Arg Pro Pro Glu Ala Met Pro Thr Val Asn Ala Thr Leu Arg
 208

580

585

590

Ile Ile Asn Gly Asn Ile Pro Val Pro Leu Cys Pro Ile Ser Phe Arg
595 600 605

Asp Cys Arg Gly Thr Gln Leu Gly Leu Gly Arg His Thr Met Thr Pro
610 615 620

Ala Thr Ile Lys Ala Val Lys Asp Thr Phe Glu Asp Arg Ala Tyr Pro
625 630 635 640

Thr Ile Phe Tyr Met Leu Glu Ala Val Ile His Gly Asn Glu Arg Asn
645 650 655

Phe Cys Ala Leu Leu Arg Leu Leu Thr Gln Cys Ile Arg Gly Tyr Trp
660 665 670

Glu Gln Ser His Arg Val Ala Phe Val Asn Asn Phe His Met Leu Met
675 680 685

Tyr Ile Thr Thr Tyr Leu Gly Asn Gly Glu Leu Pro Glu Val Cys Ile
690 695 700

Asn Ile Tyr Arg Asp Leu Leu Gln His Val Arg Ala Leu Arg Gln Thr
705 710 715 720

Ile Thr Asp Phe Thr Ile Gln Gly Glu Gly His Asn Gly Glu Thr Ser
725 730 735

Glu Ala Leu Asn Asn Ile Leu Thr Asp Asp Thr Phe Ile Ala Pro Ile
740 745 750

Leu Trp Asp Cys Asp Ala Leu Ile Tyr Arg Asp Glu Ala Ala Arg Asp
755 760 765

Arg Leu Pro Ala Ile Arg Val Ser Gly Arg Asn Gly Tyr Gln Ala Leu
770 775 780

His Phe Val Asp Met Ala Gly His Asn Phe Gln Arg Arg Asp Asn Val
785 790 795 800

Leu Ile His Gly Arg Pro Val Arg Gly Asp Thr Gly Gln Gly Ile Pro
805 810 815

Ile Thr Pro His His Asp Arg Glu Trp Gly Ile Leu Ser Lys Ile Tyr
209

820

825

830

Tyr Tyr Ile Val Ile Pro Ala Phe Ser Arg Gly Ser Cys Cys Thr Met
835 840 845

Gly Val Arg Tyr Asp Arg Leu Tyr Pro Ala Leu Gln Ala Val Ile Val
850 855 860

Pro Glu Ile Pro Ala Asp Glu Glu Ala Pro Thr Thr Pro Glu Asp Pro
865 870 875 880

Arg His Pro Leu His Ala His Gln Leu Val Pro Asn Ser Leu Asn Val
885 890 895

Tyr Phe His Asn Ala His Leu Thr Val Asp Gly Asp Ala Leu Leu Thr
900 905 910

Leu Gln Glu Leu Met Gly Asp Met Ala Glu Arg Thr Thr Ala Ile Leu
915 920 925

Val Ser Ser Ala Pro Asp Ala Gly Ala Ala Thr Ala Thr Thr Arg Asn
930 935 940

Met Arg Ile Tyr Asp Gly Ala Leu Tyr His Gly Leu Ile Met Met Ala
945 950 955 960

Tyr Gln Ala Tyr Asp Glu Thr Ile Ala Thr Gly Thr Phe Phe Tyr Pro
965 970 975

Val Pro Val Asn Pro Leu Phe Ala Cys Pro Glu His Leu Ala Ser Leu
980 985 990

Arg Gly Met Thr Asn Ala Arg Arg Val Leu Ala Lys Met Val Pro Pro
995 1000 1005

Ile Pro Pro Phe Leu Gly Ala Asn His His Ala Thr Ile Arg Gln
1010 1015 1020

Pro Val Ala Tyr His Val Thr His Ser Lys Ser Asp Phe Asn Thr
1025 1030 1035

Leu Thr Tyr Ser Leu Leu Gly Gly Tyr Phe Lys Phe Thr Pro Ile
1040 1045 1050

Ser Leu Thr His Gln Leu Arg Thr Gly Phe His Pro Gly Ile Ala
210

1055	1060	1065
Phe Thr Val Val Arg Gln Asp 1070	Arg Phe Ala Thr 1075	Glu Gln Leu Leu 1080
Tyr Ala Glu Arg Ala Ser Glu 1085	Ser Tyr Phe Val 1090	Gly Gln Ile Gln 1095
Val His His His Asp Ala Ile 1100	Gly Gly Val Asn 1105	Phe Thr Leu Thr 1110
Gln Pro Arg Ala His Val Asp 1115	Leu Gly Val Gly 1120	Tyr Thr Ala Val 1125
Cys Ala Thr Ala Ala Leu Arg 1130	Cys Pro Leu Thr 1135	Asp Met Gly Asn 1140
Thr Ala Gln Asn Leu Phe Phe 1145	Ser Arg Gly Gly 1150	Val Pro Met Leu 1155
His Asp Asn Val Thr Glu Ser 1160	Leu Arg Arg Ile 1165	Thr Ala Ser Gly 1170
Gly Arg Leu Asn Pro Thr Glu 1175	Pro Leu Pro Ile 1180	Phe Gly Gly Leu 1185
Arg Pro Ala Thr Ser Ala Gly 1190	Ile Ala Arg Gly 1195	Gln Ala Ser Val 1200
Cys Glu Phe Val Ala Met Pro 1205	Val Ser Thr Asp 1210	Leu Gln Tyr Phe 1215
Arg Thr Ala Cys Asn Pro Arg 1220	Gly Arg Ala Ser 1225	Gly Met Leu Tyr 1230
Met Gly Asp Arg Asp Ala Asp 1235	Ile Glu Ala Ile 1240	Met Phe Asp His 1245
Thr Gln Ser Asp Val Ala Tyr 1250	Thr Asp Arg Ala 1255	Thr Leu Asn Pro 1260
Trp Ala Ser Gln Lys His Ser 1265	Tyr Gly Asp Arg 1270	Leu Tyr Asn Gly 1275
Thr Tyr Asn Leu Thr Gly Ala 1280	Ser Pro Ile Tyr 1285	Ser Pro Cys Phe 1290

1280

1285

1290

Lys Phe Phe Thr Pro Ala Glu Val Asn Thr Asn Cys Asn Thr Leu
 1295 1300 1305

Asp Arg Leu Leu Met Glu Ala Lys Ala Val Ala Ser Gln Ser Ser
 1310 1315 1320

Thr Asp Thr Glu Tyr Gln Phe Lys Arg Pro Pro Gly Ser Thr Glu
 1325 1330 1335

Met Thr Gln Asp Pro Cys Gly Leu Phe Gln Glu Ala Tyr Pro Pro
 1340 1345 1350

Leu Cys Ser Ser Asp Ala Ala Met Leu Arg Thr Ala His Ala Gly
 1355 1360 1365

Glu Thr Gly Ala Asp Glu Val His Leu Ala Gln Tyr Leu Ile Arg
 1370 1375 1380

Asp Ala Ser Pro Leu Arg Gly Cys Leu Pro Leu Pro Arg
 1385 1390 1395

<210> 29

<211> 316

<212> PRT

<213> Varicella zoster

<400> 29

Met Ala Met Pro Phe Glu Ile Glu Val Leu Leu Pro Gly Glu Leu Ser
 1 5 10 15

Pro Ala Glu Thr Ser Ala Leu Gln Lys Cys Glu Gly Lys Ile Ile Thr
 20 25 30

Phe Ser Thr Leu Arg His Arg Ala Ser Leu Val Asp Ile Ala Leu Ser
 35 40 45

Ser Tyr Tyr Ile Asn Gly Ala Pro Pro Asp Thr Leu Ser Leu Leu Glu
 50 55 60

Ala Tyr Arg Met Arg Phe Ala Ala Val Ile Thr Arg Val Ile Pro Gly
 65 70 75 80

Lys Leu Leu Ala His Ala Ile Gly Val Gly Thr Pro Thr Pro Gly Leu
 85 90 95

Phe Ile Gln Asn Thr Ser Pro Val Asp Leu Cys Asn Gly Asp Tyr Ile
100 105 110

Cys Leu Leu Pro Pro Val Phe Gly Ser Ala Asp Ser Ile Arg Leu Asp
115 120 125

Ser Val Gly Leu Glu Ile Val Phe Pro Leu Thr Ile Pro Gln Thr Leu
130 135 140

Met Arg Glu Ile Ile Ala Lys Val Val Ala Arg Ala Val Glu Arg Thr
145 150 155 160

Ala Ala Gly Ala Gln Ile Leu Pro His Glu Val Leu Arg Gly Ala Asp
165 170 175

Val Ile Cys Tyr Asn Gly Arg Arg Tyr Glu Leu Glu Thr Asn Leu Gln
180 185 190

His Arg Asp Gly Ser Asp Ala Ala Ile Arg Thr Leu Val Leu Asn Leu
195 200 205

Met Phe Ser Ile Asn Glu Gly Cys Leu Leu Leu Leu Ala Leu Ile Pro
210 215 220

Thr Leu Leu Val Gln Gly Ala His Asp Gly Tyr Val Asn Leu Leu Ile
225 230 235 240

Gln Thr Ala Asn Cys Val Arg Glu Thr Gly Gln Leu Ile Asn Ile Pro
245 250 255

Pro Met Pro Arg Ile Gln Asp Gly His Arg Arg Phe Pro Ile Tyr Glu
260 265 270

Thr Ile Ser Ser Trp Ile Ser Thr Ser Ser Arg Leu Gly Asp Thr Leu
275 280 285

Gly Thr Arg Ala Ile Leu Arg Val Cys Val Phe Asp Gly Pro Ser Thr
290 295 300

Val His Pro Gly Asp Arg Thr Ala Val Ile Gln Val
305 310 315

<210> 30
<211> 676

<212> PRT

<213> Varicella zoster

<400> 30

Met Glu Ala His Leu Ala Asn Glu Thr Lys His Ala Leu Trp His Asn
1 5 10 15

Asp His Thr Lys Gly Leu Leu His Val Val Ile Pro Asn Ala Gly Leu
20 25 30

Ile Ala Ala Gly Ile Asp Pro Ala Leu Leu Ile Leu Lys Lys Pro Gly
35 40 45

Gln Arg Phe Lys Val Glu Val Gln Thr Arg Tyr His Ala Thr Gly Gln
50 55 60

Cys Glu Pro Trp Cys Gln Val Phe Ala Ala Tyr Ile Pro Asp Asn Ala
65 70 75 80

Leu Thr Asn Leu Leu Ile Pro Lys Thr Glu Pro Phe Val Ser His Val
85 90 95

Phe Ser Ala Thr His Asn Ser Gly Gly Leu Ile Leu Ser Leu Pro Val
100 105 110

Tyr Leu Ser Pro Gly Leu Phe Phe Asp Ala Phe Asn Val Val Ala Ile
115 120 125

Arg Ile Asn Thr Gly Asn Arg Lys His Arg Asp Ile Cys Ile Met Tyr
130 135 140

Ala Glu Leu Ile Pro Asn Gly Thr Arg Tyr Phe Ala Asp Gly Gln Arg
145 150 155 160

Val Leu Leu Leu Cys Lys Gln Leu Ile Ala Tyr Ile Arg Cys Thr Pro
165 170 175

Arg Leu Ala Ser Ser Ile Lys Ile Tyr Ala Glu His Met Val Ala Ala
180 185 190

Met Gly Glu Ser His Thr Ser Asn Gly Asp Asn Ile Gly Pro Val Ser
195 200 205

Ser Ile Ile Asp Leu Asp Arg Gln Leu Thr Ser Gly Gly Ile Asp Asp
210 215 220

Ser Pro Ala Glu Thr Arg Ile Gln Glu Asn Asn Arg Asp Val Leu Glu
 225 230 235 240

Leu Ile Lys Arg Ala Val Asn Ile Val Asn Ser Arg His Pro Val Arg
 245 250 255

Pro Ser Ser Ser Arg Val Ala Ser Gly Leu Leu Gln Ser Ala Lys Gly
 260 265 270

His Gly Ala Gln Thr Ser Asn Thr Asp Pro Ile Asn Asn Gly Ser Phe
 275 280 285

Asp Gly Val Leu Glu Pro Pro Gly Gln Gly Arg Phe Thr Gly Lys Lys
 290 295 300

Asn Asn Ser Ser Ala Ser Ile Pro Pro Leu Gln Asp Val Leu Leu Phe
 305 310 315 320

Thr Pro Ala Ser Thr Glu Pro Gln Ser Leu Met Glu Trp Phe Asp Ile
 325 330 335

Cys Tyr Ala Gln Leu Val Ser Gly Asp Thr Pro Ala Asp Phe Trp Lys
 340 345 350

Arg Arg Pro Leu Ser Ile Val Pro Arg His Tyr Ala Glu Ser Pro Ser
 355 360 365

Pro Leu Ile Val Val Ser Tyr Asn Gly Ser Ser Ala Trp Gly Gly Arg
 370 375 380

Ile Thr Gly Ser Pro Ile Leu Tyr His Ser Ala Gln Ala Ile Ile Asp
 385 390 395 400

Ala Ala Cys Ile Asn Ala Arg Val Asp Asn Pro Gln Ser Leu His Val
 405 410 415

Thr Ala Arg Gln Glu Leu Val Ala Arg Leu Pro Phe Leu Ala Asn Val
 420 425 430

Leu Asn Asn Gln Thr Pro Leu Pro Ala Phe Lys Pro Gly Ala Glu Met
 435 440 445

Phe Leu Asn Gln Val Phe Lys Gln Ala Cys Val Thr Ser Leu Thr Gln
 450 455 460

Gly Leu Ile Thr Glu Leu Gln Thr Asn Pro Thr Leu Gln Gln Leu Met
 465 470 475 480

Glu Tyr Asp Ile Ala Asp Ser Ser Gln Thr Val Ile Asp Glu Ile Val
 485 490 495

Ala Arg Thr Pro Asp Leu Ile Gln Thr Ile Val Ser Val Leu Thr Glu
 500 505 510

Met Ser Met Asp Ala Phe Tyr Asn Ser Ser Leu Met Tyr Ala Val Leu
 515 520 525

Ala Tyr Leu Ser Ser Val Tyr Thr Arg Pro Gln Gly Gly Gly Tyr Ile
 530 535 540

Pro Tyr Leu His Ala Ser Phe Pro Cys Trp Leu Gly Asn Arg Ser Ile
 545 550 555 560

Tyr Leu Phe Asp Tyr Tyr Asn Ser Gly Gly Glu Ile Leu Lys Leu Ser
 565 570 575

Lys Val Pro Val Pro Val Ala Leu Glu Lys Val Gly Ile Gly Asn Ser
 580 585 590

Thr Gln Leu Arg Gly Lys Phe Ile Arg Ser Ala Asp Ile Val Asp Ile
 595 600 605

Gly Ile Cys Ser Lys Tyr Leu Pro Gly Gln Cys Tyr Ala Tyr Ile Cys
 610 615 620

Leu Gly Phe Asn Gln Gln Leu Gln Ser Ile Leu Val Leu Pro Gly Gly
 625 630 635 640

Phe Ala Ala Cys Phe Cys Ile Thr Asp Thr Leu Gln Ala Ala Leu Pro
 645 650 655

Ala Ser Leu Ile Gly Pro Ile Leu Asp Arg Phe Cys Phe Ser Ile Pro
 660 665 670

Asn Pro His Lys
 675

<210> 31
 <211> 363
 <212> PRT

<213> Varicella zoster

<400> 31

Met Glu Leu Gln Arg Ile Phe Pro Leu Tyr Thr Ala Thr Gly Ala Ala
1 5 10 15

Arg Lys Leu Thr Pro Glu Ala Val Gln Arg Leu Cys Asp Ala Leu Thr
20 25 30

Leu Asp Met Gly Leu Trp Lys Ser Ile Leu Thr Asp Pro Arg Val Lys
35 40 45

Ile Met Arg Ser Thr Ala Phe Ile Thr Leu Arg Ile Ala Pro Phe Ile
50 55 60

Pro Leu Gln Thr Asp Thr Thr Asn Ile Ala Val Val Val Ala Thr Ile
65 70 75 80

Tyr Ile Thr Arg Pro Arg Gln Met Asn Leu Pro Pro Lys Thr Phe His
85 90 95

Val Ile Val Asn Phe Asn Tyr Glu Val Ser Tyr Ala Met Thr Ala Thr
100 105 110

Leu Arg Ile Tyr Pro Val Glu Asn Ile Asp His Val Phe Gly Ala Thr
115 120 125

Phe Lys Asn Pro Ile Ala Tyr Pro Leu Pro Thr Ser Ile Pro Asp Pro
130 135 140

Arg Ala Asp Pro Thr Pro Ala Asp Leu Thr Pro Thr Pro Asn Leu Ser
145 150 155 160

Asn Tyr Leu Gln Pro Pro Arg Leu Pro Lys Asn Pro Tyr Ala Cys Lys
165 170 175

Val Ile Ser Pro Gly Val Trp Trp Ser Asp Glu Arg Arg Arg Leu Tyr
180 185 190

Val Leu Ala Met Glu Pro Asn Leu Ile Gly Leu Cys Pro Ala Gly Trp
195 200 205

His Ala Arg Ile Leu Gly Ser Val Leu Asn Arg Leu Leu Ser His Ala
210 215 220

Asp Gly Cys Asp Glu Cys Asn His Arg Val His Val Gly Ala Leu Tyr
225 230 235 240

Ala Leu Pro His Val Thr Asn His Ala Glu Gly Cys Val Cys Trp Ala
245 250 255

Pro Cys Met Trp Arg Lys Ala Gly Gln Arg Glu Leu Lys Val Glu Val
260 265 270

Asp Ile Gly Ala Thr Gln Val Leu Phe Val Asp Val Thr Thr Cys Ile
275 280 285

Arg Ile Thr Ser Thr Lys Asn Pro Arg Ile Thr Ala Asn Leu Gly Asp
290 295 300

Val Ile Ala Gly Thr Asn Ala Ser Gly Leu Ser Val Pro Val Asn Ser
305 310 315 320

Ser Gly Trp Gln Leu Tyr Met Phe Gly Glu Thr Leu Ser Arg Ala Ile
325 330 335

Ile Asn Gly Cys Gly Leu Leu Gln Arg Ile Cys Phe Pro Glu Thr Gln
340 345 350

Arg Leu Ser Gly Glu Pro Glu Pro Thr Thr Thr
355 360

<210> 32
<211> 199
<212> PRT
<213> Varicella zoster

<400> 32

Met Ser Gly His Thr Pro Thr Tyr Ala Ser His Arg Arg Asn Arg Val
1 5 10 15

Lys Leu Val Glu Ala His Asn Arg Ala Gly Leu Phe Lys Glu Arg Thr
20 25 30

Leu Asp Leu Ile Arg Gly Gly Ala Ser Val Gln Asp Pro Ala Phe Val
35 40 45

Tyr Ala Phe Thr Ala Ala Lys Glu Ala Cys Ala Asp Leu Asn Asn Gln
50 55 60

Leu Arg Ser Ala Ala Arg Ile Ala Ser Val Glu Gln Lys Ile Arg Asp
218

65		70		75		80									
Ile	Gln	Ser	Lys	Val	Glu	Glu	Gln	Thr	Ser	Ile	Gln	Gln	Ile	Leu	Asn
				85					90					95	
Thr	Asn	Arg	Arg	Tyr	Ile	Ala	Pro	Asp	Phe	Ile	Arg	Gly	Leu	Asp	Lys
			100					105					110		
Thr	Glu	Asp	Asp	Asn	Thr	Asp	Asn	Ile	Asp	Arg	Leu	Glu	Asp	Ala	Val
		115					120					125			
Gly	Pro	Asn	Ile	Glu	His	Glu	Asn	His	Thr	Trp	Phe	Gly	Glu	Asp	Asp
	130					135					140				
Glu	Ala	Leu	Leu	Thr	Gln	Trp	Met	Leu	Thr	Thr	His	Pro	Pro	Thr	Ser
145					150					155					160
Lys	Tyr	Leu	Gln	Leu	Gln	Asp	Leu	Cys	Val	Pro	Thr	Thr	Ile	Pro	Thr
			165						170					175	
Asp	Met	Asn	Gln	Met	Gln	Pro	Gln	Pro	Ile	Ser	Lys	Asn	Glu	Asn	Pro
			180					185					190		
Pro	Thr	Pro	His	Thr	Asp	Val									
			195												
<210>	33														
<211>	551														
<212>	PRT														
<213>	Varicella zoster														
<400>	33														
Met	Ala	Arg	Ser	Gly	Leu	Asp	Arg	Ile	Asp	Ile	Ser	Pro	Gln	Pro	Ala
1				5					10					15	
Lys	Lys	Ile	Ala	Arg	Val	Gly	Gly	Leu	Gln	His	Pro	Phe	Val	Lys	Thr
			20					25					30		
Asp	Ile	Asn	Thr	Ile	Asn	Val	Glu	His	His	Phe	Ile	Asp	Thr	Leu	Gln
		35					40					45			
Lys	Thr	Ser	Pro	Asn	Met	Asp	Cys	Arg	Gly	Met	Thr	Ala	Gly	Ile	Phe
	50					55					60				
Ile	Arg	Leu	Ser	His	Met	Tyr	Lys	Ile	Leu	Thr	Thr	Leu	Glu	Ser	Pro
65					70					75					80

219

Asn Asp Val Thr Tyr Thr Thr Pro Gly Ser Thr Asn Ala Leu Phe Phe
85 90 95

Lys Thr Ser Thr Gln Pro Gln Glu Pro Arg Pro Glu Glu Leu Ala Ser
100 105 110

Lys Leu Thr Gln Asp Asp Ile Lys Arg Ile Leu Leu Thr Ile Glu Ser
115 120 125

Glu Thr Arg Gly Gln Gly Asp Asn Ala Ile Trp Thr Leu Leu Arg Arg
130 135 140

Asn Leu Ile Thr Ala Ser Thr Leu Lys Trp Ser Val Ser Gly Pro Val
145 150 155 160

Ile Pro Pro Gln Trp Phe Tyr His His Asn Thr Thr Asp Thr Tyr Gly
165 170 175

Asp Ala Ala Ala Met Ala Phe Gly Lys Thr Asn Glu Pro Ala Ala Arg
180 185 190

Ala Ile Val Glu Ala Leu Phe Ile Asp Pro Ala Asp Ile Arg Thr Pro
195 200 205

Asp His Leu Thr Pro Glu Ala Thr Thr Lys Phe Phe Asn Phe Asp Met
210 215 220

Leu Asn Thr Lys Ser Pro Ser Leu Leu Val Gly Thr Pro Arg Ile Gly
225 230 235 240

Thr Tyr Glu Cys Gly Leu Leu Ile Asp Val Arg Thr Gly Leu Ile Gly
245 250 255

Ala Ser Leu Asp Val Leu Val Cys Asp Arg Asp Pro Leu Thr Gly Thr
260 265 270

Leu Asn Pro His Pro Ala Glu Thr Asp Ile Ser Phe Phe Glu Ile Lys
275 280 285

Cys Arg Ala Lys Tyr Leu Phe Asp Pro Asp Asp Lys Asn Asn Pro Leu
290 295 300

Gly Arg Thr Tyr Thr Thr Leu Ile Asn Arg Pro Thr Met Ala Asn Leu
305 310 315 320

Arg Asp Phe Leu Tyr Thr Ile Lys Asn Pro Cys Val Ser Phe Phe Gly
 325 330 335

Pro Ser Ala Asn Pro Ser Thr Arg Glu Ala Leu Ile Thr Asp His Val
 340 345 350

Glu Trp Lys Arg Leu Gly Phe Lys Gly Gly Arg Ala Leu Thr Glu Leu
 355 360 365

Asp Ala His His Leu Gly Leu Asn Arg Thr Ile Ser Ser Arg Val Trp
 370 375 380

Val Phe Asn Asp Pro Asp Ile Gln Lys Gly Thr Ile Thr Thr Ile Ala
 385 390 395 400

Trp Ala Thr Gly Asp Thr Ala Leu Gln Ile Pro Val Phe Ala Asn Pro
 405 410 415

Arg His Ala Asn Phe Lys Gln Ile Ala Val Gln Thr Tyr Val Leu Ser
 420 425 430

Gly Tyr Phe Pro Ala Leu Lys Leu Arg Pro Phe Leu Val Thr Phe Ile
 435 440 445

Gly Arg Val Arg Arg Pro His Glu Val Gly Val Pro Leu Arg Val Asp
 450 455 460

Thr Gln Ala Ala Ala Ile Tyr Glu Tyr Asn Trp Pro Thr Ile Pro Pro
 465 470 475 480

His Cys Ala Val Pro Val Ile Ala Val Leu Thr Pro Ile Glu Val Asp
 485 490 495

Val Pro Arg Val Thr Gln Ile Leu Lys Asp Thr Gly Asn Asn Ala Ile
 500 505 510

Thr Ser Ala Leu Arg Ser Leu Arg Trp Asp Asn Leu His Pro Ala Val
 515 520 525

Glu Glu Glu Ser Val Asp Cys Ala Asn Gly Thr Thr Ser Leu Leu Arg
 530 535 540

Ala Thr Glu Lys Pro Leu Leu
 545 550

<210> 34
 <211> 835
 <212> PRT
 <213> Varicella zoster

<400> 34

Met Ser Pro Asn Thr Gly Glu Ser Asn Ala Ala Val Tyr Ala Ser Ser
1 5 10 15

Thr Gln Leu Ala Arg Ala Leu Tyr Gly Gly Asp Leu Val Ser Trp Ile
20 25 30

Lys His Thr His Pro Gly Ile Ser Leu Glu Leu Gln Leu Asp Val Pro
35 40 45

Val Lys Leu Ile Lys Pro Gly Met Ser Gln Thr Arg Pro Val Thr Val
50 55 60

Val Arg Ala Pro Met Gly Ser Gly Lys Thr Thr Ala Leu Leu Glu Trp
65 70 75 80

Leu Gln His Ala Leu Lys Ala Asp Ile Ser Val Leu Val Val Ser Cys
85 90 95

Arg Arg Ser Phe Thr Gln Thr Leu Ile Gln Arg Phe Asn Asp Ala Gly
100 105 110

Leu Ser Gly Phe Val Thr Tyr Leu Thr Ser Glu Thr Tyr Ile Met Gly
115 120 125

Phe Lys Arg Leu Ile Val Gln Leu Glu Ser Leu His Arg Val Ser Ser
130 135 140

Glu Ala Ile Asp Ser Tyr Asp Val Leu Ile Leu Asp Glu Val Met Ser
145 150 155 160

Val Ile Gly Gln Leu Tyr Ser Pro Thr Met Arg Arg Leu Ser Ala Val
165 170 175

Asp Ser Leu Leu Tyr Arg Leu Leu Asn Arg Cys Ser Gln Ile Ile Ala
180 185 190

Met Asp Ala Thr Val Asn Ser Gln Phe Ile Asp Leu Ile Ser Gly Leu
195 200 205

Arg Gly Asp Glu Asn Ile His Thr Ile Val Cys Thr Tyr Ala Gly Val
 210 215 220

Gly Phe Ser Gly Arg Thr Cys Thr Ile Leu Arg Asp Met Gly Ile Asp
 225 230 235 240

Thr Leu Val Arg Val Ile Lys Arg Ser Pro Glu His Glu Asp Val Arg
 245 250 255

Thr Ile His Gln Leu Arg Gly Thr Phe Phe Asp Glu Leu Ala Leu Arg
 260 265 270

Leu Gln Cys Gly His Asn Ile Cys Ile Phe Ser Ser Thr Leu Ser Phe
 275 280 285

Ser Glu Leu Val Ala Gln Phe Cys Ala Ile Phe Thr Asp Ser Ile Leu
 290 295 300

Ile Leu Asn Ser Thr Arg Pro Leu Cys Asn Val Asn Glu Trp Lys His
 305 310 315 320

Phe Arg Val Leu Val Tyr Thr Thr Val Val Thr Val Gly Leu Ser Phe
 325 330 335

Asp Met Ala His Phe His Ser Met Phe Ala Tyr Ile Lys Pro Met Ser
 340 345 350

Tyr Gly Pro Asp Met Val Ser Val Tyr Gln Ser Leu Gly Arg Val Arg
 355 360 365

Leu Leu Leu Leu Asn Glu Val Leu Met Tyr Val Asp Gly Ser Arg Thr
 370 375 380

Arg Cys Gly Pro Leu Phe Ser Pro Met Leu Leu Asn Phe Thr Ile Ala
 385 390 395 400

Asn Lys Phe Gln Trp Phe Pro Thr His Thr Gln Ile Thr Asn Lys Leu
 405 410 415

Cys Cys Ala Phe Arg Gln Arg Cys Ala Asn Ala Phe Thr Arg Ser Asn
 420 425 430

Thr His Leu Phe Ser Arg Phe Lys Tyr Lys His Leu Phe Glu Arg Cys
 435 440 445

Ser Leu Trp Ser Leu Ala Asp Ser Ile Asn Ile Leu Gln Thr Leu Leu
 450 455 460

Ala Ser Asn Gln Ile Leu Val Val Leu Asp Gly Met Gly Pro Ile Thr
 465 470 475 480

Asp Val Ser Pro Val Gln Phe Cys Ala Phe Ile His Asp Leu Arg His
 485 490 495

Ser Ala Asn Ala Val Ala Ser Cys Met Arg Ser Leu Arg Gln Asp Asn
 500 505 510

Asp Ser Cys Leu Thr Asp Phe Gly Pro Ser Gly Phe Met Ala Asp Asn
 515 520 525

Ile Thr Ala Phe Met Glu Lys Tyr Leu Met Glu Ser Ile Asn Thr Glu
 530 535 540

Glu Gln Ile Lys Val Phe Lys Ala Leu Ala Cys Pro Ile Glu Gln Pro
 545 550 555 560

Arg Leu Val Asn Thr Ala Ile Leu Gly Ala Cys Ile Arg Ile Pro Glu
 565 570 575

Ala Leu Glu Ala Phe Asp Val Phe Gln Lys Ile Tyr Thr His Tyr Ala
 580 585 590

Ser Gly Trp Phe Pro Val Leu Asp Lys Thr Gly Glu Phe Ser Ile Ala
 595 600 605

Thr Ile Thr Thr Ala Pro Asn Leu Thr Thr His Trp Glu Leu Phe Arg
 610 615 620

Arg Cys Ala Tyr Ile Ala Lys Thr Leu Lys Trp Asn Pro Ser Thr Glu
 625 630 635 640

Gly Cys Val Thr Gln Val Leu Asp Thr Asp Ile Asn Thr Leu Phe Asn
 645 650 655

Gln His Gly Asp Ser Leu Ala Gln Leu Ile Phe Glu Val Met Arg Cys
 660 665 670

Asn Val Thr Asp Ala Lys Ile Ile Leu Asn Arg Pro Val Trp Arg Thr
 675 680 685

Thr Gly Phe Leu Asp Gly Cys His Asn Gln Cys Phe Arg Pro Ile Pro
690 695 700

Thr Lys His Glu Tyr Asn Ile Ala Leu Phe Arg Leu Ile Trp Glu Gln
705 710 715 720

Leu Phe Gly Ala Arg Val Thr Lys Ser Thr Gln Thr Phe Pro Gly Ser
725 730 735

Thr Arg Val Lys Asn Leu Lys Lys Lys Asp Leu Glu Thr Leu Leu Asp
740 745 750

Ser Ile Asn Val Asp Arg Ser Ala Cys Arg Thr Tyr Arg Gln Leu Tyr
755 760 765

Asn Leu Leu Met Ser Gln Arg His Ser Phe Ser Gln Gln Arg Tyr Lys
770 775 780

Ile Thr Ala Pro Ala Trp Ala Arg His Val Tyr Phe Gln Ala His Gln
785 790 795 800

Met His Leu Ala Pro His Ala Glu Ala Met Leu Gln Leu Ala Leu Ser
805 810 815

Glu Leu Ser Pro Gly Ser Trp Pro Arg Ile Asn Gly Ala Val Asn Phe
820 825 830

Glu Ser Leu
835

<210> 35
<211> 771
<212> PRT
<213> Varicella zoster

<400> 35

Met Asp Ala Thr Gln Ile Thr Leu Val Arg Glu Ser Gly His Ile Cys
1 5 10 15

Ala Ala Ser Ile Tyr Thr Ser Trp Thr Gln Ser Gly Gln Leu Thr Gln
20 25 30

Asn Gly Leu Ser Val Leu Tyr Tyr Leu Leu Cys Lys Asn Ser Cys Gly
35 40 45

Lys Tyr Val Pro Lys Phe Ala Glu Ile Thr Val Gln Gln Glu Asp Leu
 50 55 60

Cys Arg Tyr Ser Arg His Gly Gly Ser Val Ser Ala Ala Thr Phe Ala
 65 70 75 80

Ser Ile Cys Arg Ala Ala Ser Ser Ala Ala Leu Asp Ala Trp Pro Leu
 85 90 95

Glu Pro Leu Gly Asn Ala Asp Thr Trp Arg Cys Leu His Gly Thr Ala
 100 105 110

Leu Ala Thr Leu Arg Arg Val Leu Gly Phe Lys Ser Phe Tyr Ser Pro
 115 120 125

Val Thr Phe Glu Thr Asp Thr Asn Thr Gly Leu Leu Leu Lys Thr Ile
 130 135 140

Pro Asp Glu His Ala Leu Asn Asn Asp Asn Thr Pro Ser Thr Gly Val
 145 150 155 160

Leu Arg Ala Asn Phe Pro Val Ala Ile Asp Val Ser Ala Val Ser Ala
 165 170 175

Cys Asn Ala His Thr Gln Gly Thr Ser Leu Ala Tyr Ala Arg Leu Thr
 180 185 190

Ala Leu Lys Ser Asn Gly Asp Thr Gln Gln Gln Thr Pro Leu Asp Val
 195 200 205

Glu Val Ile Thr Pro Lys Ala Tyr Ile Arg Arg Lys Tyr Lys Ser Thr
 210 215 220

Phe Ser Pro Pro Ile Glu Arg Glu Gly Gln Thr Ser Asp Leu Phe Asn
 225 230 235 240

Leu Glu Glu Arg Arg Leu Val Leu Ser Gly Asn Arg Ala Ile Val Val
 245 250 255

Arg Val Leu Leu Pro Cys Tyr Phe Asp Cys Leu Thr Thr Asp Ser Thr
 260 265 270

Val Thr Ser Ser Leu Ser Ile Leu Ala Thr Tyr Arg Leu Trp Tyr Ala
 275 280 285

Ala Ala Phe Gly Lys Pro Gly Val Val Arg Pro Ile Phe Ala Tyr Leu
 290 295 300

Gly Pro Glu Leu Asn Pro Lys Gly Glu Asp Arg Asp Tyr Phe Cys Thr
 305 310 315 320

Val Gly Phe Pro Gly Trp Thr Thr Leu Arg Thr Gln Thr Pro Ala Val
 325 330 335

Glu Ser Ile Arg Thr Ala Thr Glu Met Tyr Met Glu Thr Asp Gly Leu
 340 345 350

Trp Pro Val Thr Gly Ile Gln Ala Phe His Tyr Leu Ala Pro Trp Gly
 355 360 365

Gln His Pro Pro Leu Pro Pro Arg Val Gln Asp Leu Ile Gly Gln Ile
 370 375 380

Pro Gln Asp Thr Gly His Ala Asp Ala Thr Val Asn Trp Asp Ala Gly
 385 390 395 400

Arg Ile Ser Thr Val Phe Lys Gln Pro Val Gln Leu Gln Asp Arg Trp
 405 410 415

Met Ala Lys Phe Asp Phe Ser Ala Phe Phe Pro Thr Ile Tyr Cys Ala
 420 425 430

Met Phe Pro Met His Phe Arg Leu Gly Lys Ile Val Leu Ala Arg Met
 435 440 445

Arg Arg Gly Met Gly Cys Leu Lys Pro Ala Leu Val Ser Phe Phe Gly
 450 455 460

Gly Leu Arg His Ile Leu Pro Ser Ile Tyr Lys Ala Ile Ile Phe Ile
 465 470 475 480

Ala Asn Glu Ile Ser Leu Cys Val Glu Gln Thr Ala Leu Glu Gln Gly
 485 490 495

Phe Ala Ile Cys Thr Tyr Ile Lys Asp Gly Phe Trp Gly Ile Phe Thr
 500 505 510

Asp Leu His Thr Arg Asn Val Cys Ser Asp Gln Ala Arg Cys Ser Ala
 515 520 525

Leu Asn Leu Ala Ala Thr Cys Glu Arg Ala Val Thr Gly Leu Leu Arg
 530 535 540

Ile Gln Leu Gly Leu Asn Phe Thr Pro Ala Met Glu Pro Val Leu Arg
 545 550 555 560

Val Glu Gly Val Tyr Thr His Ala Phe Thr Trp Cys Thr Thr Gly Ser
 565 570 575

Trp Leu Trp Asn Leu Gln Thr Asn Thr Pro Pro Asp Leu Val Gly Val
 580 585 590

Pro Trp Arg Ser Gln Ala Ala Arg Asp Leu Lys Glu Arg Leu Ser Gly
 595 600 605

Leu Leu Cys Thr Ala Thr Lys Ile Arg Glu Arg Ile Gln Glu Asn Cys
 610 615 620

Ile Trp Asp His Val Leu Tyr Asp Ile Trp Ala Gly Gln Val Val Glu
 625 630 635 640

Ala Ala Arg Lys Thr Tyr Val Asp Phe Phe Glu His Val Phe Asp Arg
 645 650 655

Arg Tyr Thr Pro Val Tyr Trp Ser Leu Gln Glu Gln Asn Ser Glu Thr
 660 665 670

Lys Ala Ile Pro Ala Ser Tyr Leu Thr Tyr Gly His Met Gln Asp Lys
 675 680 685

Asp Tyr Lys Pro Arg Gln Ile Ile Met Val Arg Asn Pro Asn Pro His
 690 695 700

Gly Pro Pro Thr Val Val Tyr Trp Glu Leu Leu Pro Ser Cys Ala Cys
 705 710 715 720

Ile Pro Pro Ile Asp Cys Ala Ala His Leu Lys Pro Leu Ile His Thr
 725 730 735

Phe Val Thr Ile Ile Asn His Leu Leu Asp Ala His Asn Asp Phe Ser
 740 745 750

Ser Pro Ser Leu Lys Phe Thr Asp Asp Pro Leu Ala Ser Tyr Asn Phe
 755 760 765

Leu Phe Leu
770

<210> 36
<211> 881
<212> PRT
<213> Varicella zoster

<400> 36

Met Lys Arg Ser Ile Ser Val Asp Ser Ser Ser Pro Lys Asn Val Phe
1 5 10 15

Asn Pro Glu Thr Pro Asn Gly Phe Asp Asp Ser Val Tyr Leu Asn Phe
20 25 30

Thr Ser Met His Ser Ile Gln Pro Ile Leu Ser Arg Ile Arg Glu Leu
35 40 45

Ala Ala Ile Thr Ile Pro Lys Glu Arg Val Pro Arg Leu Cys Trp Phe
50 55 60

Lys Gln Leu Leu Glu Leu Gln Ala Pro Pro Glu Met Gln Arg Asn Glu
65 70 75 80

Leu Pro Phe Ser Val Tyr Leu Ile Ser Gly Asn Ala Gly Ser Gly Lys
85 90 95

Ser Thr Cys Ile Gln Thr Leu Asn Glu Ala Ile Asp Cys Ile Ile Thr
100 105 110

Gly Ser Thr Arg Val Ala Ala Gln Asn Val His Ala Lys Leu Ser Thr
115 120 125

Ala Tyr Ala Ser Arg Pro Ile Asn Thr Ile Phe His Glu Phe Gly Phe
130 135 140

Arg Gly Asn His Ile Gln Ala Gln Leu Gly Arg Tyr Ala Tyr Asn Trp
145 150 155 160

Thr Thr Thr Pro Pro Ser Ile Glu Asp Leu Gln Lys Arg Asp Ile Val
165 170 175

Tyr Tyr Trp Glu Val Leu Ile Asp Ile Thr Lys Arg Val Phe Gln Met
180 185 190

Gly Asp Asp Gly Arg Gly Gly Thr Ser Thr Phe Lys Thr Leu Trp Ala
229

195

200

205

Ile Glu Arg Leu Leu Asn Lys Pro Thr Gly Ser Met Ser Gly Thr Ala
 210 215 220

Phe Ile Ala Cys Gly Ser Leu Pro Ala Phe Thr Arg Ser Asn Val Ile
 225 230 235 240

Val Ile Asp Glu Ala Gly Leu Leu Gly Arg His Ile Leu Thr Ala Val
 245 250 255

Val Tyr Cys Trp Trp Leu Leu Asn Ala Ile Tyr Gln Ser Pro Gln Tyr
 260 265 270

Ile Asn Gly Arg Lys Pro Val Ile Val Cys Val Gly Ser Pro Thr Gln
 275 280 285

Thr Asp Ser Leu Glu Ser His Phe Gln His Asp Met Gln Arg Ser His
 290 295 300

Val Thr Pro Ser Glu Asn Ile Leu Thr Tyr Ile Ile Cys Asn Gln Thr
 305 310 315 320

Leu Arg Gln Tyr Thr Asn Ile Ser His Asn Trp Ala Ile Phe Ile Asn
 325 330 335

Asn Lys Arg Cys Gln Glu Asp Asp Phe Gly Asn Leu Leu Lys Thr Leu
 340 345 350

Glu Tyr Gly Leu Pro Ile Thr Glu Ala His Ala Arg Leu Val Asp Thr
 355 360 365

Phe Val Val Pro Ala Ser Tyr Ile Asn Asn Pro Ala Asn Leu Pro Gly
 370 375 380

Trp Thr Arg Leu Tyr Ser Ser His Lys Glu Val Ser Ala Tyr Met Ser
 385 390 395 400

Lys Leu His Ala His Leu Lys Leu Ser Lys Asn Asp His Phe Ser Val
 405 410 415

Phe Ala Leu Pro Thr Tyr Thr Phe Ile Arg Leu Thr Ala Phe Asp Glu
 420 425 430

Tyr Arg Lys Leu Thr Gly Gln Pro Gly Leu Ser Val Glu His Trp Ile
 230

435

440

445

Arg Ala Asn Ser Gly Arg Leu His Asn Tyr Ser Gln Ser Arg Asp His
 450 455 460

Asp Met Gly Thr Val Lys Tyr Glu Thr His Ser Asn Arg Asp Leu Ile
 465 470 475 480

Val Ala Arg Thr Asp Ile Thr Tyr Val Leu Asn Ser Leu Val Val Val
 485 490 495

Thr Thr Arg Leu Arg Lys Leu Val Ile Gly Phe Ser Gly Thr Phe Gln
 500 505 510

Ser Phe Ala Lys Val Leu Arg Asp Asp Ser Phe Val Lys Ala Arg Gly
 515 520 525

Glu Thr Ser Ile Glu Tyr Ala Tyr Arg Phe Leu Ser Asn Leu Ile Phe
 530 535 540

Gly Gly Leu Ile Asn Phe Tyr Asn Phe Leu Leu Asn Lys Asn Leu His
 545 550 555 560

Pro Asp Lys Val Ser Leu Ala Tyr Lys Arg Leu Ala Ala Leu Thr Leu
 565 570 575

Glu Leu Leu Ser Gly Thr Asn Lys Ala Pro Leu His Glu Ala Ala Val
 580 585 590

Asn Gly Ala Gly Ala Gly Ile Asp Cys Asp Gly Ala Ala Thr Ser Ala
 595 600 605

Asp Lys Ala Phe Cys Phe Thr Lys Ala Pro Glu Ser Lys Val Thr Ala
 610 615 620

Ser Ile Pro Glu Asp Pro Asp Asp Val Ile Phe Thr Ala Leu Asn Asp
 625 630 635 640

Glu Val Ile Asp Leu Val Tyr Cys Gln Tyr Glu Phe Ser Tyr Pro Lys
 645 650 655

Ser Ser Asn Glu Val His Ala Gln Phe Leu Leu Met Lys Ala Ile Tyr
 660 665 670

Asp Gly Arg Tyr Ala Ile Leu Ala Glu Leu Phe Glu Ser Ser Phe Thr
 231

675

680

685

Thr Ala Pro Phe Ser Ala Tyr Val Asp Asn Val Asn Phe Asn Gly Ser
 690 695 700

Glu Leu Leu Ile Gly Asn Val Arg Gly Gly Leu Leu Ser Leu Ala Leu
 705 710 715 720

Gln Thr Asp Thr Tyr Thr Leu Leu Gly Tyr Thr Phe Ala Pro Val Pro
 725 730 735

Val Phe Val Glu Glu Leu Thr Arg Lys Lys Leu Tyr Arg Glu Thr Thr
 740 745 750

Glu Met Leu Tyr Ala Leu His Val Pro Leu Met Val Leu Gln Asp Gln
 755 760 765

His Gly Phe Val Ser Ile Val Asn Ala Asn Val Cys Glu Phe Thr Glu
 770 775 780

Ser Ile Glu Asp Ala Glu Leu Ala Met Ala Thr Thr Val Asp Tyr Gly
 785 790 795 800

Leu Ser Ser Lys Leu Ala Met Thr Ile Ala Arg Ser Gln Gly Leu Ser
 805 810 815

Leu Glu Lys Val Ala Ile Cys Phe Thr Ala Asp Lys Leu Arg Leu Asn
 820 825 830

Ser Val Tyr Val Ala Met Ser Arg Thr Val Ser Ser Arg Phe Leu Lys
 835 840 845

Met Asn Leu Asn Pro Leu Arg Glu Arg Tyr Glu Lys Ser Ala Glu Ile
 850 855 860

Ser Asp His Ile Leu Ala Ala Leu Arg Asp Pro Asn Val His Val Val
 865 870 875 880

Tyr

<210> 37
 <211> 278
 <212> PRT
 <213> Varicella zoster

<400> 37

Met Phe Cys Thr Ser Pro Ala Thr Arg Gly Asp Ser Ser Glu Ser Lys
1 5 10 15

Pro Gly Ala Ser Val Asp Val Asn Gly Lys Met Glu Tyr Gly Ser Ala
20 25 30

Pro Gly Pro Leu Asn Gly Arg Asp Thr Ser Arg Gly Pro Gly Ala Phe
35 40 45

Cys Thr Pro Gly Trp Glu Ile His Pro Ala Arg Leu Val Glu Asp Ile
50 55 60

Asn Arg Val Phe Leu Cys Ile Ala Gln Ser Ser Gly Arg Val Thr Arg
65 70 75 80

Asp Ser Arg Arg Leu Arg Arg Ile Cys Leu Asp Phe Tyr Leu Met Gly
85 90 95

Arg Thr Arg Gln Arg Pro Thr Leu Ala Cys Trp Glu Glu Leu Leu Gln
100 105 110

Leu Gln Pro Thr Gln Thr Gln Cys Leu Arg Ala Thr Leu Met Glu Val
115 120 125

Ser His Arg Pro Pro Arg Gly Glu Asp Gly Phe Ile Glu Ala Pro Asn
130 135 140

Val Pro Leu His Arg Ser Ala Leu Glu Cys Asp Val Ser Asp Asp Gly
145 150 155 160

Gly Glu Asp Asp Ser Asp Asp Asp Gly Ser Thr Pro Ser Asp Val Ile
165 170 175

Glu Phe Arg Asp Ser Asp Ala Glu Ser Ser Asp Gly Glu Asp Phe Ile
180 185 190

Val Glu Glu Glu Ser Glu Glu Ser Thr Asp Ser Cys Glu Pro Asp Gly
195 200 205

Val Pro Gly Asp Cys Tyr Arg Asp Gly Asp Gly Cys Asn Thr Pro Ser
210 215 220

Pro Lys Arg Pro Gln Arg Ala Ile Glu Arg Tyr Ala Gly Ala Glu Thr
225 230 235 240

233

Ala Glu Tyr Thr Ala Ala Lys Ala Leu Thr Ala Leu Gly Glu Gly Gly
245 250 255

Val Asp Trp Lys Arg Arg Arg His Glu Ala Pro Arg Arg His Asp Ile
260 265 270

Pro Pro Pro His Gly Val
275

<210> 38
<211> 180
<212> PRT
<213> Varicella zoster

<400> 38

Met Asn Leu Cys Gly Ser Arg Gly Glu His Pro Gly Gly Glu Tyr Ala
1 5 10 15

Gly Leu Tyr Cys Thr Arg His Asp Thr Pro Ala His Gln Ala Leu Met
20 25 30

Asn Asp Ala Glu Arg Tyr Phe Ala Ala Ala Leu Cys Ala Ile Ser Thr
35 40 45

Glu Ala Tyr Glu Ala Phe Ile His Ser Pro Ser Glu Arg Pro Cys Ala
50 55 60

Ser Leu Trp Gly Arg Ala Lys Asp Ala Phe Gly Arg Met Cys Gly Glu
65 70 75 80

Leu Ala Ala Asp Arg Gln Arg Pro Pro Ser Val Pro Pro Ile Arg Arg
85 90 95

Ala Val Leu Ser Leu Leu Arg Glu Gln Cys Met Pro Asp Pro Gln Ser
100 105 110

His Leu Glu Leu Ser Glu Arg Leu Ile Leu Met Ala Tyr Trp Cys Cys
115 120 125

Leu Gly His Ala Gly Leu Pro Thr Ile Gly Leu Ser Pro Asp Asn Lys
130 135 140

Cys Ile Arg Ala Glu Leu Tyr Asp Arg Pro Gly Gly Ile Cys His Arg
145 150 155 160

Leu Phe Asp Ala Tyr Leu Gly Cys Gly Ser Leu Gly Val Pro Arg Thr
165 170 175

Tyr Glu Arg Ser
180

<210> 39
<211> 393
<212> PRT
<213> Varicella zoster

<400> 39

Met Asn Asp Val Asp Ala Thr Asp Thr Phe Val Gly Gln Gly Lys Phe
1 5 10 15

Arg Gly Ala Ile Ser Thr Ser Pro Ser His Ile Met Gln Thr Cys Gly
20 25 30

Phe Ile Gln Gln Met Phe Pro Val Glu Met Ser Pro Gly Ile Glu Ser
35 40 45

Glu Asp Asp Pro Asn Tyr Asp Val Asn Met Asp Ile Gln Ser Phe Asn
50 55 60

Ile Phe Asp Gly Val His Glu Thr Glu Ala Glu Ala Ser Val Ala Leu
65 70 75 80

Cys Ala Glu Ala Arg Val Gly Ile Asn Lys Ala Gly Phe Val Ile Leu
85 90 95

Lys Thr Phe Thr Pro Gly Ala Glu Gly Phe Ala Phe Ala Cys Met Asp
100 105 110

Ser Lys Thr Cys Glu His Val Val Ile Lys Ala Gly Gln Arg Gln Gly
115 120 125

Thr Ala Thr Glu Ala Thr Val Leu Arg Ala Leu Thr His Pro Ser Val
130 135 140

Val Gln Leu Lys Gly Thr Phe Thr Tyr Asn Lys Met Thr Cys Leu Ile
145 150 155 160

Leu Pro Arg Tyr Arg Thr Asp Leu Tyr Cys Tyr Leu Ala Ala Lys Arg
165 170 175

Asn Leu Pro Ile Cys Asp Ile Leu Ala Ile Gln Arg Ser Val Leu Arg
 180 185 190
 Ala Leu Gln Tyr Leu His Asn Asn Ser Ile Ile His Arg Asp Ile Lys
 195 200 205
 Ser Glu Asn Ile Phe Ile Asn His Pro Gly Asp Val Cys Val Gly Asp
 210 215 220
 Phe Gly Ala Ala Cys Phe Pro Val Asp Ile Asn Ala Asn Arg Tyr Tyr
 225 230 235 240
 Gly Trp Ala Gly Thr Ile Ala Thr Asn Ser Pro Glu Leu Leu Ala Arg
 245 250 255
 Asp Pro Tyr Gly Pro Ala Val Asp Ile Trp Ser Ala Gly Ile Val Leu
 260 265 270
 Phe Glu Met Ala Thr Gly Gln Asn Ser Leu Phe Glu Arg Asp Gly Leu
 275 280 285
 Asp Gly Asn Cys Asp Ser Glu Arg Gln Ile Lys Leu Ile Ile Arg Arg
 290 295 300
 Ser Gly Thr His Pro Asn Glu Phe Pro Ile Asn Pro Thr Ser Asn Leu
 305 310 315 320
 Arg Arg Gln Tyr Ile Gly Leu Ala Lys Arg Ser Ser Arg Lys Pro Gly
 325 330 335
 Ser Arg Pro Leu Trp Thr Asn Leu Tyr Glu Leu Pro Ile Asp Leu Glu
 340 345 350
 Tyr Leu Ile Cys Lys Met Leu Ser Phe Asp Ala Arg His Arg Pro Ser
 355 360 365
 Ala Glu Val Leu Leu Asn His Ser Val Phe Gln Thr Leu Pro Asp Pro
 370 375 380
 Tyr Pro Asn Pro Met Glu Val Gly Asp
 385 390

<210> 40
 <211> 354
 <212> PRT
 <213> Varicella zoster

<400> 40

Met Phe Leu Ile Gln Cys Leu Ile Ser Ala Val Ile Phe Tyr Ile Gln
1 5 10 15

Val Thr Asn Ala Leu Ile Phe Lys Gly Asp His Val Ser Leu Gln Val
20 25 30

Asn Ser Ser Leu Thr Ser Ile Leu Ile Pro Met Gln Asn Asp Asn Tyr
35 40 45

Thr Glu Ile Lys Gly Gln Leu Val Phe Ile Gly Glu Gln Leu Pro Thr
50 55 60

Gly Thr Asn Tyr Ser Gly Thr Leu Glu Leu Leu Tyr Ala Asp Thr Val
65 70 75 80

Ala Phe Cys Phe Arg Ser Val Gln Val Ile Arg Tyr Asp Gly Cys Pro
85 90 95

Arg Ile Arg Thr Ser Ala Phe Ile Ser Cys Arg Tyr Lys His Ser Trp
100 105 110

His Tyr Gly Asn Ser Thr Asp Arg Ile Ser Thr Glu Pro Asp Ala Gly
115 120 125

Val Met Leu Lys Ile Thr Lys Pro Gly Ile Asn Asp Ala Gly Val Tyr
130 135 140

Val Leu Leu Val Arg Leu Asp His Ser Arg Ser Thr Asp Gly Phe Ile
145 150 155 160

Leu Gly Val Asn Val Tyr Thr Ala Gly Ser His His Asn Ile His Gly
165 170 175

Val Ile Tyr Thr Ser Pro Ser Leu Gln Asn Gly Tyr Ser Thr Arg Ala
180 185 190

Leu Phe Gln Gln Ala Arg Leu Cys Asp Leu Pro Ala Thr Pro Lys Gly
195 200 205

Ser Gly Thr Ser Leu Phe Gln His Met Leu Asp Leu Arg Ala Gly Lys
210 215 220

Ser Leu Glu Asp Asn Pro Trp Leu His Glu Asp Val Val Thr Thr Glu
237

225 230 235 240

Thr Lys Ser Val Val Lys Glu Gly Ile Glu Asn His Val Tyr Pro Thr
245 255

Asp Met Ser Thr Leu Pro Glu Lys Ser Leu Asn Asp Pro Pro Glu Asn
260 265 270

Leu Leu Ile Ile Ile Pro Ile Val Ala Ser Val Met Ile Leu Thr Ala
275 285

Met Val Ile Val Ile Val Ile Ser Val Lys Arg Arg Arg Ile Lys Lys
290 295 300

His Pro Ile Tyr Arg Pro Asn Thr Lys Thr Arg Arg Gly Ile Gln Asn
305 310 315 320

Ala Thr Pro Glu Ser Asp Val Met Leu Glu Ala Ala Ile Ala Gln Leu
325 330 335

Ala Thr Ile Arg Glu Glu Ser Pro Pro His Ser Val Val Asn Pro Phe
340 345 350

Val Lys

<210> 41
<211> 623
<212> PRT
<213> Varicella zoster

<400> 41

Met Gly Thr Val Asn Lys Pro Val Val Gly Val Leu Met Gly Phe Gly
1 5 10 15

Ile Ile Thr Gly Thr Leu Arg Ile Thr Asn Pro Val Arg Ala Ser Val
20 25 30

Leu Arg Tyr Asp Asp Phe His Thr Asp Glu Asp Lys Leu Asp Thr Asn
35 40 45

Ser Val Tyr Glu Pro Tyr Tyr His Ser Asp His Ala Glu Ser Ser Trp
50 55 60

Val Asn Arg Gly Glu Ser Ser Arg Lys Ala Tyr Asp His Asn Ser Pro
65 70 75 80

238

Tyr Ile Trp Pro Arg Asn Asp Tyr Asp Gly Phe Leu Glu Asn Ala His
85 90 95

Glu His His Gly Val Tyr Asn Gln Gly Arg Gly Ile Asp Ser Gly Glu
100 105 110

Arg Leu Met Gln Pro Thr Gln Met Ser Ala Gln Glu Asp Leu Gly Asp
115 120 125

Asp Thr Gly Ile His Val Ile Pro Thr Leu Asn Gly Asp Asp Arg His
130 135 140

Lys Ile Val Asn Val Asp Gln Arg Gln Tyr Gly Asp Val Phe Lys Gly
145 150 155 160

Asp Leu Asn Pro Lys Pro Gln Gly Gln Arg Leu Ile Glu Val Ser Val
165 170 175

Glu Glu Asn His Pro Phe Thr Leu Arg Ala Pro Ile Gln Arg Ile Tyr
180 185 190

Gly Val Arg Tyr Thr Glu Thr Trp Ser Phe Leu Pro Ser Leu Thr Cys
195 200 205

Thr Gly Asp Ala Ala Pro Ala Ile Gln His Ile Cys Leu Lys His Thr
210 215 220

Thr Cys Phe Gln Asp Val Val Val Asp Val Asp Cys Ala Glu Asn Thr
225 230 235 240

Lys Glu Asp Gln Leu Ala Glu Ile Ser Tyr Arg Phe Gln Gly Lys Lys
245 250 255

Glu Ala Asp Gln Pro Trp Ile Val Val Asn Thr Ser Thr Leu Phe Asp
260 265 270

Glu Leu Glu Leu Asp Pro Pro Glu Ile Glu Pro Gly Val Leu Lys Val
275 280 285

Leu Arg Thr Glu Lys Gln Tyr Leu Gly Val Tyr Ile Trp Asn Met Arg
290 295 300

Gly Ser Asp Gly Thr Ser Thr Tyr Ala Thr Phe Leu Val Thr Trp Lys
305 310 315 320

Gly Asp Glu Lys Thr Arg Asn Pro Thr Pro Ala Val Thr Pro Gln Pro
325 330 335

Arg Gly Ala Glu Phe His Met Trp Asn Tyr His Ser His Val Phe Ser
340 345 350

Val Gly Asp Thr Phe Ser Leu Ala Met His Leu Gln Tyr Lys Ile His
355 360 365

Glu Ala Pro Phe Asp Leu Leu Leu Glu Trp Leu Tyr Val Pro Ile Asp
370 375 380

Pro Thr Cys Gln Pro Met Arg Leu Tyr Ser Thr Cys Leu Tyr His Pro
385 390 395 400

Asn Ala Pro Gln Cys Leu Ser His Met Asn Ser Gly Cys Thr Phe Thr
405 410 415

Ser Pro His Leu Ala Gln Arg Val Ala Ser Thr Val Tyr Gln Asn Cys
420 425 430

Glu His Ala Asp Asn Tyr Thr Ala Tyr Cys Leu Gly Ile Ser His Met
435 440 445

Glu Pro Ser Phe Gly Leu Ile Leu His Asp Gly Gly Thr Thr Leu Lys
450 455 460

Phe Val Asp Thr Pro Glu Ser Leu Ser Gly Leu Tyr Val Phe Val Val
465 470 475 480

Tyr Phe Asn Gly His Val Glu Ala Val Ala Tyr Thr Val Val Ser Thr
485 490 495

Val Asp His Phe Val Asn Ala Ile Glu Glu Arg Gly Phe Pro Pro Thr
500 505 510

Ala Gly Gln Pro Pro Ala Thr Thr Lys Pro Lys Glu Ile Thr Pro Val
515 520 525

Asn Pro Gly Thr Ser Pro Leu Leu Arg Tyr Ala Ala Trp Thr Gly Gly
530 535 540

Leu Ala Ala Val Val Leu Leu Cys Leu Val Ile Phe Leu Ile Cys Thr
545 550 555 560

Ala Lys Arg Met Arg Val Lys Ala Tyr Arg Val Asp Lys Ser Pro Tyr
565 570 575

Asn Gln Ser Met Tyr Tyr Ala Gly Leu Pro Val Asp Asp Phe Glu Asp
580 585 590

Ser Glu Ser Thr Asp Thr Glu Glu Glu Phe Gly Asn Ala Ile Gly Gly
595 600 605

Ser His Gly Gly Ser Ser Tyr Thr Val Tyr Ile Asp Lys Thr Arg
610 615 620

<210> 42
<211> 1310
<212> PRT
<213> Varicella zoster

<400> 42

Met Asp Thr Pro Pro Met Gln Arg Ser Thr Pro Gln Arg Ala Gly Ser
1 5 10 15

Pro Asp Thr Leu Glu Leu Met Asp Leu Leu Asp Ala Ala Ala Ala Ala
20 25 30

Ala Glu His Arg Ala Arg Val Val Thr Ser Ser Gln Pro Asp Asp Leu
35 40 45

Leu Phe Gly Glu Asn Gly Val Met Val Gly Arg Glu His Glu Ile Val
50 55 60

Ser Ile Pro Ser Val Ser Gly Leu Gln Pro Glu Pro Arg Thr Glu Asp
65 70 75 80

Val Gly Glu Glu Leu Thr Gln Asp Asp Tyr Val Cys Glu Asp Gly Gln
85 90 95

Asp Leu Met Gly Ser Pro Val Ile Pro Leu Ala Glu Val Phe His Thr
100 105 110

Arg Phe Ser Glu Ala Gly Ala Arg Glu Pro Thr Gly Ala Asp Arg Ser
115 120 125

Leu Glu Thr Val Ser Leu Gly Thr Lys Leu Ala Arg Ser Pro Lys Pro
130 135 140

Pro Met Asn Asp Gly Glu Thr Gly Arg Gly Thr Thr Pro Pro Phe Pro
 145 150 155 160

Gln Ala Phe Ser Pro Val Ser Pro Ala Ser Pro Val Gly Asp Ala Ala
 165 170 175

Gly Asn Asp Gln Arg Glu Asp Gln Arg Ser Ile Pro Arg Gln Thr Thr
 180 185 190

Arg Gly Asn Ser Pro Gly Leu Pro Ser Val Val His Arg Asp Arg Gln
 195 200 205

Thr Gln Ser Ile Ser Gly Lys Lys Pro Gly Asp Glu Gln Ala Gly His
 210 215 220

Ala His Ala Ser Gly Asp Gly Val Val Leu Gln Lys Thr Gln Arg Pro
 225 230 235 240

Ala Gln Gly Lys Ser Pro Lys Lys Lys Thr Leu Lys Val Lys Val Pro
 245 250 255

Leu Pro Ala Arg Lys Pro Gly Gly Pro Val Pro Gly Pro Val Glu Gln
 260 265 270

Leu Tyr His Val Leu Ser Asp Ser Val Pro Ala Lys Gly Ala Lys Ala
 275 280 285

Asp Leu Pro Phe Glu Thr Asp Asp Thr Arg Pro Arg Lys His Asp Ala
 290 295 300

Arg Gly Ile Thr Pro Arg Val Pro Gly Arg Ser Ser Gly Gly Lys Pro
 305 310 315 320

Arg Ala Phe Leu Ala Leu Pro Gly Arg Ser His Ala Pro Asp Pro Ile
 325 330 335

Glu Asp Asp Ser Pro Val Glu Lys Lys Pro Lys Ser Arg Glu Phe Val
 340 345 350

Ser Ser Ser Ser Ser Ser Ser Ser Trp Gly Ser Ser Ser Glu Asp Glu
 355 360 365

Asp Asp Glu Pro Arg Arg Val Ser Val Gly Ser Glu Thr Thr Gly Ser
 370 375 380

Arg Ser Gly Arg Glu His Ala Pro Ser Pro Ser Asn Ser Asp Asp Ser
385 390 395 400

Asp Ser Asn Asp Gly Gly Ser Thr Lys Gln Asn Ile Gln Pro Gly Tyr
405 410 415

Arg Ser Ile Ser Gly Pro Asp Pro Arg Ile Arg Lys Thr Lys Arg Leu
420 425 430

Ala Gly Glu Pro Gly Arg Gln Arg Gln Lys Ser Phe Ser Leu Pro Arg
435 440 445

Ser Arg Thr Pro Ile Ile Pro Pro Val Ser Gly Pro Leu Met Met Pro
450 455 460

Asp Gly Ser Pro Trp Pro Gly Ser Ala Pro Leu Pro Ser Asn Arg Val
465 470 475 480

Arg Phe Gly Pro Ser Gly Glu Thr Arg Glu Gly His Trp Glu Asp Glu
485 490 495

Ala Val Arg Ala Ala Arg Ala Arg Tyr Glu Ala Ser Thr Glu Pro Val
500 505 510

Pro Leu Tyr Val Pro Glu Leu Gly Asp Pro Ala Arg Gln Tyr Arg Ala
515 520 525

Leu Ile Asn Leu Ile Tyr Cys Pro Asp Arg Asp Pro Ile Ala Trp Leu
530 535 540

Gln Asn Pro Lys Leu Thr Gly Val Asn Ser Ala Leu Asn Gln Phe Tyr
545 550 555 560

Gln Lys Leu Leu Pro Pro Gly Arg Ala Gly Thr Ala Val Thr Gly Ser
565 570 575

Val Ala Ser Pro Val Pro His Val Gly Glu Ala Met Ala Thr Gly Glu
580 585 590

Ala Leu Trp Ala Leu Pro His Ala Ala Ala Val Ala Met Ser Arg
595 600 605

Arg Tyr Asp Arg Ala Gln Lys His Phe Ile Leu Gln Ser Leu Arg Arg
610 615 620

Ala Phe Ala Ser Met Ala Tyr Pro Glu Ala Thr Gly Ser Ser Pro Ala
625 630 635 640

Ala Arg Ile Ser Arg Gly His Pro Ser Pro Thr Thr Pro Ala Thr Gln
645 650 655

Ala Pro Asp Pro Gln Pro Ser Ala Ala Ala Arg Ser Leu Ser Val Cys
660 665 670

Pro Pro Asp Asp Arg Leu Arg Thr Pro Arg Lys Arg Lys Ser Gln Pro
675 680 685

Val Glu Ser Arg Ser Leu Leu Asp Lys Ile Arg Glu Thr Pro Val Ala
690 695 700

Asp Ala Arg Val Ala Asp Asp His Val Val Ser Lys Ala Lys Arg Arg
705 710 715 720

Val Ser Glu Pro Val Thr Ile Thr Ser Gly Pro Val Val Asp Pro Pro
725 730 735

Ala Val Ile Thr Met Pro Leu Asp Gly Pro Ala Pro Asn Gly Gly Phe
740 745 750

Arg Arg Ile Pro Arg Gly Ala Leu His Thr Pro Val Pro Ser Asp Gln
755 760 765

Ala Arg Lys Ala Tyr Cys Thr Pro Glu Thr Ile Ala Arg Leu Val Asp
770 775 780

Asp Pro Leu Phe Pro Thr Ala Trp Arg Pro Ala Leu Ser Phe Asp Pro
785 790 795 800

Gly Ala Leu Ala Glu Ile Ala Ala Arg Arg Pro Gly Gly Gly Asp Arg
805 810 815

Arg Phe Gly Pro Pro Ser Gly Val Glu Ala Leu Arg Arg Arg Cys Ala
820 825 830

Trp Met Arg Gln Ile Pro Asp Pro Glu Asp Val Arg Leu Leu Ile Ile
835 840 845

Tyr Asp Pro Leu Pro Gly Glu Asp Ile Asn Gly Pro Leu Glu Ser Thr
850 855 860

Leu Ala Thr Asp Pro Gly Pro Ser Trp Ser Pro Ser Arg Gly Gly Leu
865 870 875 880

Ser Val Val Leu Ala Ala Leu Ser Asn Arg Leu Cys Leu Pro Ser Thr
885 890 895

His Ala Trp Ala Gly Asn Trp Thr Gly Pro Pro Asp Val Ser Ala Leu
900 905 910

Asn Ala Arg Gly Val Leu Leu Leu Ser Thr Arg Asp Leu Ala Phe Ala
915 920 925

Gly Ala Val Glu Tyr Leu Gly Ser Arg Leu Ala Ser Ala Arg Arg Arg
930 935 940

Leu Leu Val Leu Asp Ala Val Ala Leu Glu Arg Trp Pro Arg Asp Gly
945 950 955 960

Pro Ala Leu Ser Gln Tyr His Val Tyr Val Arg Ala Pro Ala Arg Pro
965 970 975

Asp Ala Gln Ala Val Val Arg Trp Pro Asp Ser Ala Val Thr Glu Gly
980 985 990

Leu Ala Arg Ala Val Phe Ala Ser Ser Arg Thr Phe Gly Pro Ala Ser
995 1000 1005

Phe Ala Arg Ile Glu Thr Ala Phe Ala Asn Leu Tyr Pro Gly Glu
1010 1015 1020

Gln Pro Leu Cys Leu Cys Arg Gly Gly Asn Val Ala Tyr Thr Val
1025 1030 1035

Cys Thr Arg Ala Gly Pro Lys Thr Arg Val Pro Leu Ser Pro Arg
1040 1045 1050

Glu Tyr Arg Gln Tyr Val Leu Pro Gly Phe Asp Gly Cys Lys Asp
1055 1060 1065

Leu Ala Arg Gln Ser Arg Gly Leu Gly Leu Gly Ala Ala Asp Phe
1070 1075 1080

Val Asp Glu Ala Ala His Ser His Arg Ala Ala Asn Arg Trp Gly
1085 1090 1095

Leu	Gly	Ala	Ala	Leu	Arg	Pro	Val	Phe	Leu	Pro	Glu	Gly	Arg	Arg
	1100					1105					1110			
Pro	Gly	Ala	Ala	Gly	Pro	Glu	Ala	Gly	Asp	Val	Pro	Thr	Trp	Ala
	1115					1120					1125			
Arg	Val	Phe	Cys	Arg	His	Ala	Leu	Leu	Glu	Pro	Asp	Pro	Ala	Ala
	1130					1135					1140			
Glu	Pro	Leu	Val	Leu	Pro	Pro	Val	Ala	Gly	Arg	Ser	Val	Ala	Leu
	1145					1150					1155			
Tyr	Ala	Ser	Ala	Asp	Glu	Ala	Arg	Asn	Ala	Leu	Pro	Pro	Ile	Pro
	1160					1165					1170			
Arg	Val	Met	Trp	Pro	Pro	Gly	Phe	Gly	Ala	Ala	Glu	Thr	Val	Leu
	1175					1180					1185			
Glu	Gly	Ser	Asp	Gly	Thr	Arg	Phe	Val	Phe	Gly	His	His	Gly	Gly
	1190					1195					1200			
Ser	Glu	Arg	Pro	Ser	Glu	Thr	Gln	Ala	Gly	Arg	Gln	Arg	Arg	Thr
	1205					1210					1215			
Ala	Asp	Asp	Arg	Glu	His	Ala	Leu	Glu	Leu	Asp	Asp	Trp	Glu	Val
	1220					1225					1230			
Gly	Cys	Glu	Asp	Ala	Trp	Asp	Ser	Glu	Glu	Gly	Gly	Gly	Asp	Asp
	1235					1240					1245			
Gly	Asp	Ala	Pro	Gly	Ser	Ser	Phe	Gly	Val	Ser	Ile	Val	Ser	Val
	1250					1255					1260			
Ala	Pro	Gly	Val	Leu	Arg	Asp	Arg	Arg	Val	Gly	Leu	Arg	Pro	Ala
	1265					1270					1275			
Val	Lys	Val	Glu	Leu	Leu	Ser	Ser	Ser	Ser	Ser	Ser	Glu	Asp	Glu
	1280					1285					1290			
Asp	Asp	Val	Trp	Gly	Gly	Arg	Gly	Gly	Arg	Ser	Pro	Pro	Gln	Ser
	1295					1300					1305			
Arg	Gly													
	1310													

<210> 43
 <211> 1002
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (1)..(1002)

<400> 43
 atg cat tta aag cct acc aga ttt ttc cac gca aac caa ccg cca atg 48
 Met His Leu Lys Pro Thr Arg Phe Phe His Ala Asn Gln Pro Pro Met
 1 5 10 15
 ccg cat tca tac gag atg gag gac tta tgc ttc gac gac atg caa tat 96
 Pro His Ser Tyr Glu Met Glu Asp Leu Cys Phe Asp Asp Met Gln Tyr
 20 25 30
 cgc tgg tct ccc tcg aac aca ccc tat cga agt atg tct agg cga tat 144
 Arg Trp Ser Pro Ser Asn Thr Pro Tyr Arg Ser Met Ser Arg Arg Tyr
 35 40 45
 aaa tcc gta tct cgg agc ggg cct tcg atg cgt gta cgc tcc aga acg 192
 Lys Ser Val Ser Arg Ser Gly Pro Ser Met Arg Val Arg Ser Arg Thr
 50 55 60
 cca tgc cgc cgt caa acc att cga gga aaa ctt atg tca aag gag cgg 240
 Pro Cys Arg Arg Gln Thr Ile Arg Gly Lys Leu Met Ser Lys Glu Arg
 65 70 75 80
 tct gtg tac cgc cat tat ttt aat tac atc gca agg tcc ccc cca gaa 288
 Ser Val Tyr Arg His Tyr Phe Asn Tyr Ile Ala Arg Ser Pro Pro Glu
 85 90 95
 gaa cta gct acc gtt aga ggc tta atc gtg cca att att aag acg acc 336
 Glu Leu Ala Thr Val Arg Gly Leu Ile Val Pro Ile Ile Lys Thr Thr
 100 105 110
 cct gtc acc ctt ccg ttt aac ttg ggt cag aca gtg gcg gat aac tgc 384
 Pro Val Thr Leu Pro Phe Asn Leu Gly Gln Thr Val Ala Asp Asn Cys
 115 120 125
 ctg tcg tta tcc gga atg ggt tat cat tta ggt ctc gga ggt tat tgt 432
 Leu Ser Leu Ser Gly Met Gly Tyr His Leu Gly Leu Gly Gly Tyr Cys
 130 135 140
 ccg aca tgc act gca tct gga gaa ccg cgt cta tgt cga acc gat cgg 480
 Pro Thr Cys Thr Ala Ser Gly Glu Pro Arg Leu Cys Arg Thr Asp Arg
 145 150 155 160
 gcg gct ctg ata cta gca tat gtt cag cag ctt aac aac ata tac gaa 528
 Ala Ala Leu Ile Leu Ala Tyr Val Gln Gln Leu Asn Asn Ile Tyr Glu
 165 170 175
 tat cgt gtg ttt ctt gca tcc att ttg gcg cta tca gac cga gcc aac 576
 Tyr Arg Val Phe Leu Ala Ser Ile Leu Ala Leu Ser Asp Arg Ala Asn
 180 185 190

atg caa gca gcg tcc gct gaa ccc cta ttg tcg agc gta ttg gca caa Met Gln Ala Ala Ser Ala Glu Pro Leu Leu Ser Ser Val Leu Ala Gln 195 200 205	624
ccg gaa tta ttt ttt atg tat cat att atg agg gag ggg ggc atg cga Pro Glu Leu Phe Phe Met Tyr His Ile Met Arg Glu Gly Gly Met Arg 210 215 220	672
gat ata cgc gta ctt ttt tat cgt gat gga gat gcc gga ggg ttt atg Asp Ile Arg Val Leu Phe Tyr Arg Asp Gly Asp Ala Gly Gly Phe Met 225 230 235 240	720
atg tat gtt ata ttt ccg ggg aaa tct gtt cac ctc cat tac aga cta Met Tyr Val Ile Phe Pro Gly Lys Ser Val His Leu His Tyr Arg Leu 245 250 255	768
atc gat cat ata cag gcc gcg tgt cgg ggg tat aaa ata gtc gca cac Ile Asp His Ile Gln Ala Ala Cys Arg Gly Tyr Lys Ile Val Ala His 260 265 270	816
gtt tgg cag aca aca ttt tta ctg tcg gta tgt cgc aac cca gaa caa Val Trp Gln Thr Thr Phe Leu Leu Ser Val Cys Arg Asn Pro Glu Gln 275 280 285	864
caa aca gag act gtg gtg cca tcc att gga aca tcg gac gtt tac tgt Gln Thr Glu Thr Val Val Pro Ser Ile Gly Thr Ser Asp Val Tyr Cys 290 295 300	912
aaa atg tgt gac ctt aac ttt gat gga gaa ttg ctt ttg gaa tac aaa Lys Met Cys Asp Leu Asn Phe Asp Gly Glu Leu Leu Leu Glu Tyr Lys 305 310 315 320	960
aga ctc tac gca tta ttt gat gac ttt gtt cct cct cgg tga Arg Leu Tyr Ala Leu Phe Asp Asp Phe Val Pro Pro Arg 325 330	1002

<210> 44
 <211> 333
 <212> PRT
 <213> Varicella zoster

<400> 44

Met His Leu Lys Pro Thr Arg Phe Phe His Ala Asn Gln Pro Pro Met 1 5 10 15
--

Pro His Ser Tyr Glu Met Glu Asp Leu Cys Phe Asp Asp Met Gln Tyr 20 25 30

Arg Trp Ser Pro Ser Asn Thr Pro Tyr Arg Ser Met Ser Arg Arg Tyr 35 40 45

Lys Ser Val Ser Arg Ser Gly Pro Ser Met Arg Val Arg Ser Arg Thr 50 55 60

Pro Cys Arg Arg Gln Thr Ile Arg Gly Lys Leu Met Ser Lys Glu Arg
 65 70 75 80

Ser Val Tyr Arg His Tyr Phe Asn Tyr Ile Ala Arg Ser Pro Pro Glu
 85 90 95

Glu Leu Ala Thr Val Arg Gly Leu Ile Val Pro Ile Ile Lys Thr Thr
 100 105 110

Pro Val Thr Leu Pro Phe Asn Leu Gly Gln Thr Val Ala Asp Asn Cys
 115 120 125

Leu Ser Leu Ser Gly Met Gly Tyr His Leu Gly Leu Gly Gly Tyr Cys
 130 135 140

Pro Thr Cys Thr Ala Ser Gly Glu Pro Arg Leu Cys Arg Thr Asp Arg
 145 150 155 160

Ala Ala Leu Ile Leu Ala Tyr Val Gln Gln Leu Asn Asn Ile Tyr Glu
 165 170 175

Tyr Arg Val Phe Leu Ala Ser Ile Leu Ala Leu Ser Asp Arg Ala Asn
 180 185 190

Met Gln Ala Ala Ser Ala Glu Pro Leu Leu Ser Ser Val Leu Ala Gln
 195 200 205

Pro Glu Leu Phe Phe Met Tyr His Ile Met Arg Glu Gly Gly Met Arg
 210 215 220

Asp Ile Arg Val Leu Phe Tyr Arg Asp Gly Asp Ala Gly Gly Phe Met
 225 230 235 240

Met Tyr Val Ile Phe Pro Gly Lys Ser Val His Leu His Tyr Arg Leu
 245 250 255

Ile Asp His Ile Gln Ala Ala Cys Arg Gly Tyr Lys Ile Val Ala His
 260 265 270

Val Trp Gln Thr Thr Phe Leu Leu Ser Val Cys Arg Asn Pro Glu Gln
 275 280 285

Gln Thr Glu Thr Val Val Pro Ser Ile Gly Thr Ser Asp Val Tyr Cys
 290 295 300

Lys Met Cys Asp Leu Asn Phe Asp Gly Glu Leu Leu Leu Glu Tyr Lys
 305 310 315 320

Arg Leu Tyr Ala Leu Phe Asp Asp Phe Val Pro Pro Arg
 325 330

<210> 45
 <211> 1533
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (1)..(1533)

<400> 45
 atg gat gct gac gac aca ccc ccc aac ctc caa ata tct cca act gca 48
 Met Asp Ala Asp Asp Thr Pro Pro Asn Leu Gln Ile Ser Pro Thr Ala
 1 5 10 15
 gga cct ttg cgt tcc cac cac aat acc gac gga cat gaa cca aat gca 96
 Gly Pro Leu Arg Ser His His Asn Thr Asp Gly His Glu Pro Asn Ala
 20 25 30
 acc gca gcc gat cag caa gaa cga gaa tcc acc aac ccc aca cac gga 144
 Thr Ala Ala Asp Gln Gln Glu Arg Glu Ser Thr Asn Pro Thr His Gly
 35 40 45
 tgt gta aat cat cca tgg gcc aat ccg tca act gca aca tgc atg gaa 192
 Cys Val Asn His Pro Trp Ala Asn Pro Ser Thr Ala Thr Cys Met Glu
 50 55 60
 tca cca gaa cga tca caa cag aca agc tta ttt tta tta aag cac ggc 240
 Ser Pro Glu Arg Ser Gln Gln Thr Ser Leu Phe Leu Leu Lys His Gly
 65 70 75 80
 tta acg aga gat cca ata cat caa cgc gaa agg gtg gac gtt ttt cca 288
 Leu Thr Arg Asp Pro Ile His Gln Arg Glu Arg Val Asp Val Phe Pro
 85 90 95
 caa ttt aac aaa ccc cca tgg gtt ttt aga att tcc aaa tta tcc cgt 336
 Gln Phe Asn Lys Pro Pro Trp Val Phe Arg Ile Ser Lys Leu Ser Arg
 100 105 110
 tta att gta ccc atc ttc acg ctc aat gaa cag tta tgt ttt tct aaa 384
 Leu Ile Val Pro Ile Phe Thr Leu Asn Glu Gln Leu Cys Phe Ser Lys
 115 120 125
 tta cag att cga gat aga ccc agg ttt gcg gga cgg gga acg tat ggg 432
 Leu Gln Ile Arg Asp Arg Pro Arg Phe Ala Gly Arg Gly Thr Tyr Gly
 130 135 140
 cgt gtt cat ata tac cca tcg tca aaa ata gct gta aaa acc atg gac 480
 Arg Val His Ile Tyr Pro Ser Ser Lys Ile Ala Val Lys Thr Met Asp
 145 150 155 160
 agt cgt gtt ttt aat aga gag tta att aac gcg att tta gcg agt gag 528
 250

Ser	Arg	Val	Phe	Asn	Arg	Glu	Leu	Ile	Asn	Ala	Ile	Leu	Ala	Ser	Glu	
				165					170					175		
ggt	tct	ata	cga	gca	ggg	gaa	agg	cta	ggt	att	tct	agc	ata	ggt	tgc	576
Gly	Ser	Ile	Arg	Ala	Gly	Glu	Arg	Leu	Gly	Ile	Ser	Ser	Ile	Val	Cys	
			180					185					190			
ctt	tta	ggt	ttt	tcg	tta	caa	acc	aaa	cag	cta	ctg	ttt	ccg	gca	tac	624
Leu	Leu	Gly	Phe	Ser	Leu	Gln	Thr	Lys	Gln	Leu	Leu	Phe	Pro	Ala	Tyr	
		195					200					205				
gac	atg	gat	atg	gat	gaa	tac	att	ggt	cgc	ctg	tcc	aga	cgg	ttg	aca	672
Asp	Met	Asp	Met	Asp	Glu	Tyr	Ile	Val	Arg	Leu	Ser	Arg	Arg	Leu	Thr	
	210					215					220					
ata	cct	gat	cac	ata	gac	aga	aaa	att	gcc	cat	gta	ttt	tta	gat	ttg	720
Ile	Pro	Asp	His	Ile	Asp	Arg	Lys	Ile	Ala	His	Val	Phe	Leu	Asp	Leu	
225					230				235						240	
gct	caa	gcg	ttg	acg	ttt	tta	aat	cga	acg	tgc	ggc	ctg	acc	cac	cta	768
Ala	Gln	Ala	Leu	Thr	Phe	Leu	Asn	Arg	Thr	Cys	Gly	Leu	Thr	His	Leu	
				245					250					255		
gat	gtg	aaa	tgt	ggc	aat	att	ttt	ctt	aac	gtc	gac	aac	ttt	gcc	tcg	816
Asp	Val	Lys	Cys	Gly	Asn	Ile	Phe	Leu	Asn	Val	Asp	Asn	Phe	Ala	Ser	
			260					265					270			
ttg	gaa	ata	acc	aca	gca	gta	atc	gga	gac	tat	agc	cta	gta	aca	tta	864
Leu	Glu	Ile	Thr	Thr	Ala	Val	Ile	Gly	Asp	Tyr	Ser	Leu	Val	Thr	Leu	
		275					280					285				
aat	acg	tat	tcc	ctt	tgt	act	cga	gcg	ata	ttt	gaa	ggt	gga	aat	cca	912
Asn	Thr	Tyr	Ser	Leu	Cys	Thr	Arg	Ala	Ile	Phe	Glu	Val	Gly	Asn	Pro	
	290					295					300					
tcc	cac	ccg	gag	cac	gta	cta	cgc	gta	ccc	cgg	gat	gca	tcg	cag	atg	960
Ser	His	Pro	Glu	His	Val	Leu	Arg	Val	Pro	Arg	Asp	Ala	Ser	Gln	Met	
305					310				315						320	
tca	ttt	cgt	ttg	gtg	ttg	agt	cat	gga	aca	aac	caa	ccc	cct	gaa	atc	1008
Ser	Phe	Arg	Leu	Val	Leu	Ser	His	Gly	Thr	Asn	Gln	Pro	Pro	Glu	Ile	
				325				330						335		
ttg	ctt	gat	tat	att	aat	gga	acg	ggc	ctt	act	aaa	tat	act	gga	acc	1056
Leu	Leu	Asp	Tyr	Ile	Asn	Gly	Thr	Gly	Leu	Thr	Lys	Tyr	Thr	Gly	Thr	
			340				345						350			
ttg	ccc	caa	aga	ggt	gga	ctt	gcg	att	gat	ctt	tat	gca	ttg	ggc	caa	1104
Leu	Pro	Gln	Arg	Val	Gly	Leu	Ala	Ile	Asp	Leu	Tyr	Ala	Leu	Gly	Gln	
		355					360					365				
gca	ctc	tta	gaa	ggt	atc	ctg	cta	gga	cgt	ctt	ccc	gga	caa	ctg	ccc	1152
Ala	Leu	Leu	Glu	Val	Ile	Leu	Leu	Gly	Arg	Leu	Pro	Gly	Gln	Leu	Pro	
	370					375					380					
att	tca	gta	cat	cgg	acc	ccg	cat	tat	cac	tac	tac	ggt	cat	aag	tta	1200
Ile	Ser	Val	His	Arg	Thr	Pro	His	Tyr	His	Tyr	Tyr	Gly	His	Lys	Leu	
385					390					395					400	
tca	cca	gat	ttg	gcg	ctt	gat	acg	ctg	gca	tat	cga	tgt	gtc	ctg	gcg	1248
										251						

Ser	Pro	Asp	Leu	Ala	Leu	Asp	Thr	Leu	Ala	Tyr	Arg	Cys	Val	Leu	Ala		
				405					410					415			
cca	tat	ata	ctc	cca	tct	gac	atc	ccc	ggg	gac	tta	aat	tat	aat	ccc		1296
Pro	Tyr	Ile	Leu	Pro	Ser	Asp	Ile	Pro	Gly	Asp	Leu	Asn	Tyr	Asn	Pro		
			420					425					430				
ttt	ata	cac	gcc	gga	gag	ctg	aac	acc	cgt	att	tcc	cgg	aat	tct	tta		1344
Phe	Ile	His	Ala	Gly	Glu	Leu	Asn	Thr	Arg	Ile	Ser	Arg	Asn	Ser	Leu		
		435					440					445					
cgc	cgg	ata	ttc	cag	tgt	cac	gca	gtg	cgt	tac	ggc	gta	acg	cac	tca		1392
Arg	Arg	Ile	Phe	Gln	Cys	His	Ala	Val	Arg	Tyr	Gly	Val	Thr	His	Ser		
	450					455					460						
aag	ctt	ttc	gaa	ggc	ata	cgc	att	ccg	gcc	tca	tta	tac	cca	gcc	act		1440
Lys	Leu	Phe	Glu	Gly	Ile	Arg	Ile	Pro	Ala	Ser	Leu	Tyr	Pro	Ala	Thr		
465					470				475						480		
gtt	gtt	aca	tcg	ttg	ttg	tgt	cac	gat	aat	tca	gaa	ata	cgc	tcg	gat		1488
Val	Val	Thr	Ser	Leu	Leu	Cys	His	Asp	Asn	Ser	Glu	Ile	Arg	Ser	Asp		
				485					490					495			
cac	cct	tta	tta	tgg	cac	gat	cgg	gat	tgg	ata	gga	tcg	aca	taa			1533
His	Pro	Leu	Leu	Trp	His	Asp	Arg	Asp	Trp	Ile	Gly	Ser	Thr				
			500					505					510				

<210> 46
 <211> 510
 <212> PRT
 <213> Varicella zoster

<400> 46

Met	Asp	Ala	Asp	Asp	Thr	Pro	Pro	Asn	Leu	Gln	Ile	Ser	Pro	Thr	Ala		
1				5					10					15			
Gly	Pro	Leu	Arg	Ser	His	His	Asn	Thr	Asp	Gly	His	Glu	Pro	Asn	Ala		
			20					25					30				
Thr	Ala	Ala	Asp	Gln	Gln	Glu	Arg	Glu	Ser	Thr	Asn	Pro	Thr	His	Gly		
		35					40					45					
Cys	Val	Asn	His	Pro	Trp	Ala	Asn	Pro	Ser	Thr	Ala	Thr	Cys	Met	Glu		
	50					55					60						
Ser	Pro	Glu	Arg	Ser	Gln	Gln	Thr	Ser	Leu	Phe	Leu	Leu	Lys	His	Gly		
65					70					75					80		
Leu	Thr	Arg	Asp	Pro	Ile	His	Gln	Arg	Glu	Arg	Val	Asp	Val	Phe	Pro		
				85					90					95			
Gln	Phe	Asn	Lys	Pro	Pro	Trp	Val	Phe	Arg	Ile	Ser	Lys	Leu	Ser	Arg		

100	105	110
Leu Ile Val Pro Ile Phe Thr	Leu Asn Glu Gln Leu Cys Phe Ser Lys	
115	120	125
Leu Gln Ile Arg Asp Arg Pro Arg Phe Ala Gly Arg Gly Thr Tyr Gly		
130	135	140
Arg Val His Ile Tyr Pro Ser Ser Lys Ile Ala Val Lys Thr Met Asp		
145	150	155 160
Ser Arg Val Phe Asn Arg Glu Leu Ile Asn Ala Ile Leu Ala Ser Glu		
	165	170 175
Gly Ser Ile Arg Ala Gly Glu Arg Leu Gly Ile Ser Ser Ile Val Cys		
	180	185 190
Leu Leu Gly Phe Ser Leu Gln Thr Lys Gln Leu Leu Phe Pro Ala Tyr		
	195	200 205
Asp Met Asp Met Asp Glu Tyr Ile Val Arg Leu Ser Arg Arg Leu Thr		
	210	215 220
Ile Pro Asp His Ile Asp Arg Lys Ile Ala His Val Phe Leu Asp Leu		
225	230	235 240
Ala Gln Ala Leu Thr Phe Leu Asn Arg Thr Cys Gly Leu Thr His Leu		
	245	250 255
Asp Val Lys Cys Gly Asn Ile Phe Leu Asn Val Asp Asn Phe Ala Ser		
	260	265 270
Leu Glu Ile Thr Thr Ala Val Ile Gly Asp Tyr Ser Leu Val Thr Leu		
	275	280 285
Asn Thr Tyr Ser Leu Cys Thr Arg Ala Ile Phe Glu Val Gly Asn Pro		
	290	295 300
Ser His Pro Glu His Val Leu Arg Val Pro Arg Asp Ala Ser Gln Met		
305	310	315 320
Ser Phe Arg Leu Val Leu Ser His Gly Thr Asn Gln Pro Pro Glu Ile		
	325	330 335
Leu Leu Asp Tyr Ile Asn Gly Thr Gly Leu Thr Lys Tyr Thr Gly Thr		
		253

340	345	350
Leu Pro Gln Arg Val Gly Leu Ala Ile Asp Leu Tyr Ala Leu Gly Gln		
355	360	365
Ala Leu Leu Glu Val Ile Leu Leu Gly Arg Leu Pro Gly Gln Leu Pro		
370	375	380
Ile Ser Val His Arg Thr Pro His Tyr His Tyr Tyr Gly His Lys Leu		
385	390	395
Ser Pro Asp Leu Ala Leu Asp Thr Leu Ala Tyr Arg Cys Val Leu Ala		
405	410	415
Pro Tyr Ile Leu Pro Ser Asp Ile Pro Gly Asp Leu Asn Tyr Asn Pro		
420	425	430
Phe Ile His Ala Gly Glu Leu Asn Thr Arg Ile Ser Arg Asn Ser Leu		
435	440	445
Arg Arg Ile Phe Gln Cys His Ala Val Arg Tyr Gly Val Thr His Ser		
450	455	460
Lys Leu Phe Glu Gly Ile Arg Ile Pro Ala Ser Leu Tyr Pro Ala Thr		
465	470	475
Val Val Thr Ser Leu Leu Cys His Asp Asn Ser Glu Ile Arg Ser Asp		
485	490	495
His Pro Leu Leu Trp His Asp Arg Asp Trp Ile Gly Ser Thr		
500	505	510

<210> 47
 <211> 246
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (1)..(246)

<400> 47	
atg gga caa tct tca tcc agc ggt cga gga gga atc tgt gga ttg tgc	48
Met Gly Gln Ser Ser Ser Ser Gly Arg Gly Gly Ile Cys Gly Leu Cys	
1 5 10 15	
aaa cgg tac aac gag ctt gtt acg tgc aac gga gaa acc gtt gct ttg	96
Lys Arg Tyr Asn Glu Leu Val Thr Cys Asn Gly Glu Thr Val Ala Leu	

20										25					30					
aac	tca	gag	ttc	ttt	gaa	gac	ttt	gac	ttt	gat	gag	aat	gta	aca	gag	144				
Asn	Ser	Glu	Phe	Phe	Glu	Asp	Phe	Asp	Phe	Asp	Glu	Asn	Val	Thr	Glu					
		35					40					45								
gac	gcc	gat	aaa	tcc	aca	caa	cgc	cgc	cca	cga	gtg	atc	gat	gta	aca	192				
Asp	Ala	Asp	Lys	Ser	Thr	Gln	Arg	Arg	Pro	Arg	Val	Ile	Asp	Val	Thr					
	50					55					60									
cca	aaa	cga	aaa	cct	tcg	gga	aag	agc	tcc	cat	tcc	aaa	tgc	gca	aaa	240				
Pro	Lys	Arg	Lys	Pro	Ser	Gly	Lys	Ser	Ser	His	Ser	Lys	Cys	Ala	Lys					
65					70					75					80					
tgt	taa															246				
Cys																				

<210> 48
 <211> 81
 <212> PRT
 <213> Varicella zoster

<400> 48

Met	Gly	Gln	Ser	Ser	Ser	Ser	Gly	Arg	Gly	Gly	Ile	Cys	Gly	Leu	Cys
1				5					10					15	

Lys	Arg	Tyr	Asn	Glu	Leu	Val	Thr	Cys	Asn	Gly	Glu	Thr	Val	Ala	Leu
			20					25					30		

Asn	Ser	Glu	Phe	Phe	Glu	Asp	Phe	Asp	Phe	Asp	Glu	Asn	Val	Thr	Glu
		35					40					45			

Asp	Ala	Asp	Lys	Ser	Thr	Gln	Arg	Arg	Pro	Arg	Val	Ile	Asp	Val	Thr
	50					55					60				

Pro	Lys	Arg	Lys	Pro	Ser	Gly	Lys	Ser	Ser	His	Ser	Lys	Cys	Ala	Lys
65					70					75					80

Cys

<210> 49
 <211> 735
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (1)..(735)

<400> 49

atg aaa aat ccg cag aaa tta gcg atc aca ttc ttg ccg ctc tac gtg 48
Met Lys Asn Pro Gln Lys Leu Ala Ile Thr Phe Leu Pro Leu Tyr Val
1 5 10 15

atc cca acg tac acg ttg tgt att aaa gca ttg tat aaa aac acg cat 96
Ile Pro Thr Tyr Thr Leu Cys Ile Lys Ala Leu Tyr Lys Asn Thr His
20 25 30

gcg ggc ttg ctg ttc tca ttt cta ggt ttt gtc tta aat aca ccc gcc 144
Ala Gly Leu Leu Phe Ser Phe Leu Gly Phe Val Leu Asn Thr Pro Ala
35 40 45

atg agc atc tct gga ccc cca acg acg ttt att tta tat agg tta cat 192
Met Ser Ile Ser Gly Pro Pro Thr Thr Phe Ile Leu Tyr Arg Leu His
50 55 60

ggg gtt agg cgg gtt ctt cac tgg act tta ccg gat cat gaa caa aca 240
Gly Val Arg Arg Val Leu His Trp Thr Leu Pro Asp His Glu Gln Thr
65 70 75 80

ctc tac gca ttt acg ggt ggg tca aga tca atg gcg gtg aag acg gac 288
Leu Tyr Ala Phe Thr Gly Gly Ser Arg Ser Met Ala Val Lys Thr Asp
85 90 95

gct cga tgt gat aca atg agc ggt ggt atg atc gtc ctt caa cac acc 336
Ala Arg Cys Asp Thr Met Ser Gly Gly Met Ile Val Leu Gln His Thr
100 105 110

cat aca gtg acc ctg cta acc ata gac tgt tct act gac ttt tca tca 384
His Thr Val Thr Leu Leu Thr Ile Asp Cys Ser Thr Asp Phe Ser Ser
115 120 125

tac gca ttt acg cac cgg gat ttc cac tta cag gac aaa ccc cac gca 432
Tyr Ala Phe Thr His Arg Asp Phe His Leu Gln Asp Lys Pro His Ala
130 135 140

aca ttt gcg atg ccg ttt atg tcc tgg gtc ggt tct gac cca aca tct 480
Thr Phe Ala Met Pro Phe Met Ser Trp Val Gly Ser Asp Pro Thr Ser
145 150 155 160

cag ctg tac agt aat gtg ggg ggg gta cta tcc gta ata acg gaa gat 528
Gln Leu Tyr Ser Asn Val Gly Gly Val Leu Ser Val Ile Thr Glu Asp
165 170 175

gac cta tcc atg tgt atc tca att gtt ata tac ggt tta cgg gta aac 576
Asp Leu Ser Met Cys Ile Ser Ile Val Ile Tyr Gly Leu Arg Val Asn
180 185 190

aga cct gac gat cag acc aca cca aca cca acc ccg cac cag tat aca 624
Arg Pro Asp Asp Gln Thr Thr Pro Thr Pro Thr Pro His Gln Tyr Thr
195 200 205

tcg caa agg cgg cag cct gaa acc aac tgt cct tct tca cca caa ccg 672
Ser Gln Arg Arg Gln Pro Glu Thr Asn Cys Pro Ser Ser Pro Gln Pro
210 215 220

gcc ttt ttc aca tca gac gac gac gtt ctt tcg tta ata tta cgg gac 720
Ala Phe Phe Thr Ser Asp Asp Asp Val Leu Ser Leu Ile Leu Arg Asp
225 230 235 240

gcc gca aac gcg taa
Ala Ala Asn Ala

735

<210> 50
<211> 244
<212> PRT
<213> Varicella zoster

<400> 50

Met Lys Asn Pro Gln Lys Leu Ala Ile Thr Phe Leu Pro Leu Tyr Val
1 5 10 15

Ile Pro Thr Tyr Thr Leu Cys Ile Lys Ala Leu Tyr Lys Asn Thr His
20 25 30

Ala Gly Leu Leu Phe Ser Phe Leu Gly Phe Val Leu Asn Thr Pro Ala
35 40 45

Met Ser Ile Ser Gly Pro Pro Thr Thr Phe Ile Leu Tyr Arg Leu His
50 55 60

Gly Val Arg Arg Val Leu His Trp Thr Leu Pro Asp His Glu Gln Thr
65 70 75 80

Leu Tyr Ala Phe Thr Gly Gly Ser Arg Ser Met Ala Val Lys Thr Asp
85 90 95

Ala Arg Cys Asp Thr Met Ser Gly Gly Met Ile Val Leu Gln His Thr
100 105 110

His Thr Val Thr Leu Leu Thr Ile Asp Cys Ser Thr Asp Phe Ser Ser
115 120 125

Tyr Ala Phe Thr His Arg Asp Phe His Leu Gln Asp Lys Pro His Ala
130 135 140

Thr Phe Ala Met Pro Phe Met Ser Trp Val Gly Ser Asp Pro Thr Ser
145 150 155 160

Gln Leu Tyr Ser Asn Val Gly Gly Val Leu Ser Val Ile Thr Glu Asp
165 170 175

Asp Leu Ser Met Cys Ile Ser Ile Val Ile Tyr Gly Leu Arg Val Asn
180 185 190

Arg Pro Asp Asp Gln Thr Thr Pro Thr Pro Thr Pro His Gln Tyr Thr
 195 200 205

Ser Gln Arg Arg Gln Pro Glu Thr Asn Cys Pro Ser Ser Pro Gln Pro
 210 215 220

Ala Phe Phe Thr Ser Asp Asp Asp Val Leu Ser Leu Ile Leu Arg Asp
 225 230 235 240

Ala Ala Asn Ala

<210> 51
 <211> 124884
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (5569) .. (6405)

<220>
 <221> CDS
 <222> (6553) .. (7095)

<220>
 <221> CDS
 <222> (12245) .. (12553)

<220>
 <221> CDS
 <222> (15752) .. (19684)

<220>
 <221> CDS
 <222> (20400) .. (21803)

<220>
 <221> CDS
 <222> (23666) .. (24583)

<220>
 <221> CDS
 <222> (25259) .. (25474)

<220>
 <221> CDS
 <222> (31035) .. (32030)

<220>
 <221> CDS
 <222> (54592) .. (56217)

<220>

<221> CDS
 <222> (60132) .. (60908)

 <220>
 <221> CDS
 <222> (60975) .. (62714)

 <220>
 <221> CDS
 <222> (62747) .. (64564)

 <220>
 <221> CDS
 <222> (74249) .. (77833)

 <220>
 <221> CDS
 <222> (80267) .. (80737)

 <220>
 <221> CDS
 <222> (80864) .. (81673)

 <220>
 <221> CDS
 <222> (81747) .. (82454)

 <220>
 <221> CDS
 <222> (94410) .. (95861)

 <220>
 <221> CDS
 <222> (96040) .. (98367)

 <220>
 <221> CDS
 <222> (98392) .. (99312)

 <220>
 <221> CDS
 <222> (101091) .. (102317)

 <220>
 <221> CDS
 <222> (102407) .. (103627)

 <220>
 <221> CDS
 <222> (103772) .. (105454)

 <220>
 <221> CDS
 <222> (114218) .. (115408)

 <220>
 <221> CDS
 <222> (116308) .. (119559)

 <220>

<221> CDS
 <222> (119611)..(120633)

<220>
 <221> CDS
 <222> (120744)..(122102)

<220>
 <221> CDS
 <222> (122438)..(122977)

<220>
 <221> CDS
 <222> (123970)..(124296)

<400> 51
 cctctcccgg ggtccgccgg gcgcccagaa accggggggg ggttatatttc ggggggggggt 60
 ccgaccagcc cgcccgtcgc ccgcccgcac agacagacag acactttttt cataaaaacc 120
 gttccgcttt tattaacaac aaacagtccg cgcgccagtg gcgctcacga gaaaaggagg 180
 ggactccgtc acccccgact ctgcgggggg ctctctcccc cgcgccctcc ccacacatcg 240
 tcctcgtcct cggaggacga ggacgaggac aacagctcca ccttgaccgc cgggcgcaaa 300
 cccacccggc ggtctcgcag cacaccggg gccaccgaca cgatgctcac cccaaaggat 360
 gaccccggtg cgctcccgtc gtcccgcgcc cctctctcgc tgtcccacgc gtcttcacac 420
 cccacctccc aatcgtccag ctccaaagcg tgttctctgt cgtctgcggg gcgcccgtgt 480
 cgccccgcct gggtttctga cggccgttcc gagcccccg ggtgtccgaa cacgaaccgt 540
 gttccgtcgc tcccctccaa caccgtctcc gcggccccaa aaccgggcgg ccacattact 600
 ctgggaatcg gggggagggg attccgagcc tcgtccgccc acgcatacag cgccaccgac 660
 cgaccggcca cgggtggaag cacgagtggg tctgcggcag ggtcgggttc cagcagggcg 720
 tggcggcaaa acaccctcgc ccagggtggg acgtcgccgg cctccggccc ggccggcccc 780
 ggtctccgtc cctcgggaag gaagacgggt cgaagcgcgg caccagggc ccatcggttt 840
 gctgcgcggg ggctatgtgc cgcctcgtcc acaaagtcgg ctgccccgag cccagagacc 900
 cgagactgtc gcgcgagggt cttgcaaccg tcaaaacccg gcagcacgta ctgccggtat 960
 tcacggggcg acagggggac gcgggtcttg gggcccgcgc gggtagacac ggtgtatgcg 1020
 acgttcccac cgcggcacaa acacaggggt tggtcgcccc ggtacaggtt ggcaaacgca 1080
 gtctcgatac gagcaaaact cgctggccca aaggtgcgcg acgatgcaaa cacggcccgg 1140
 gcgagtcctt ctgtgaccgc cgagtctggc catcggacga cggcctgggc gtccgggtcgc 1200
 gccggggccc ggacgtacac gtgatactga gacaaagcgg gtccatccct gggccacctc 1260
 tcgagggcca ccgcgtccaa caccagcaac cggcgccggg cagaggccaa ccgcgagcct 1320

agatactcga	cggccccggc	aaaggccagg	tctcgggtcg	acagtaataa	aacgccccgg	1380
gcgttcaaag	cggacacgtc	cggcgggccc	gtccagttcc	cggcccaggc	atgagtgtc	1440
ggcaggcaca	accggttact	cagggctgcc	aggaccacag	acagtcccc	tcgggatgga	1500
ctccatgacg	gtcccggatc	tgtcgcgagg	gtgctctcga	gggggcccgtt	gatgtcctct	1560
ccgggcaacg	gatcgtagat	gatcagaagc	ctcacatcct	ccgggtctgg	gatctgccgc	1620
atccaggcgc	acctccgtcg	cagcgcctcc	actccgctgg	gtggaccaa	ccgtcgggtc	1680
cctccgcccc	gacgccgagc	ggcgatttcc	gccaaaggcg	cgggatcaaa	gcttagcgca	1740
gggcgccagg	ccgtgggaaa	caatgggtcg	tcgaccagac	gggcgatggt	ttcgggggta	1800
cagtacgcct	tgcgagcctg	gtccgacggg	accgggggtat	gcagggcccc	ccggggaata	1860
cgccgaaatc	ccccgtttgg	ggccgggtccg	tcaagtggca	tcgttattac	ggcgggggga	1920
tccaccacag	ggccccgaggt	gatggtcacg	ggctcggata	cccgcctctt	ggccttgga	1980
accacatgat	cgtctgcaac	ccgggcgtcc	gcgacgggtg	tctcccta	cttgtcgagg	2040
aggcttctgc	tctcgactgg	ctgggacttg	cgcttgccgc	gagttcgtaa	acgatcatcc	2100
ggtggacaca	cagaaagaga	gcgtgcggcg	gccgacggct	gagggtcggg	agcctgtgtg	2160
gccgggggtt	ttggagaagg	gtgaccgcgg	gagatccgcg	ccgccggact	ggagcccgtt	2220
gcctcggggg	atgccatgct	ggcaaaggct	ctgcggagac	tctgtaggat	aaagtgtttt	2280
tgggccccgt	cgtatcgacg	gctcatagcc	acggccgcgg	ccgcgtgggg	gagagcccag	2340
agggcctccc	ccgtggccat	ggcttcgcct	acatgcggaa	cgggagacgc	tacgctcccc	2400
gtaacggcgg	taccgcgccg	tcccgggtgg	aacagctttt	ggtagaactg	gttcagggcc	2460
gagttgacac	cggtcagctt	ggggttctgg	agccatgcta	tagggctctt	gtctggacag	2520
tagatcaggt	taatcagcgc	gcggtactgt	ctagccggat	ctcccaactc	cggcacgtaa	2580
agcggcacgg	gttccgttga	ggcctcgtaa	cgagcccgcg	ccgctctcac	agcctcatcc	2640
tcccagtgac	cctctctggg	ctccccggac	ggtccaaacc	gcaccctggt	ggatgggagg	2700
ggtgccgac	cgggccaagg	gcttccgtcg	ggcatcatga	gcggccccga	caccggggga	2760
attatcgggg	ttctggatcg	cggcagggaa	aatgatttct	gtctctggcg	ccccggttcc	2820
cccgaagac	gtttggtctt	acgaatcctc	ggatcgggac	cgctgatgga	tcgatatccc	2880
ggttgatata	tttgtttcgt	cgaccaccca	tcatttgagt	ccgaatcatc	cgaatttgac	2940
ggggaagggg	cgtgttcgcg	tccggacctg	ctgcctgtag	tttcacttcc	caccgaaacg	3000
cgccgggggt	catcgtcttc	atcctccgat	gacgatcccc	acgacgagga	agaggatgaa	3060
gacgaaacaa	actcacgact	ctttggcttt	ttctccactg	ggctgtcatc	ctcaatcggg	3120

tctggtgcgt	gggatcttcc	cggcagggcc	aaaaacgctc	taggtttgcc	ccccgacgaa	3180
cgtccaggga	cgcgaggtgt	tataccccgg	gcatcatggt	tccttgggcg	ggtatcatcg	3240
gtctcaaacg	gcaggtccgc	ctttgcccc	ttagcgggaa	cgctgtccga	aaggacgtgg	3300
tacaattgct	caaccgggcc	gggtacaggt	ccaccggggt	tccgcgccgg	gagtgggacc	3360
ttaaccttca	aagtcttttt	cttcgggctc	tttccttgag	cgggccgttg	agttttctgg	3420
agaactactc	cgtcccccca	tgcattgcga	tgaccgcgtt	gctcatcgcc	cggcttttta	3480
cccagatagg	actgagtttg	tctgtctcga	tggaccaccg	acggcaaacc	tgggtgaattt	3540
cctctcgtcg	tttgtcgggg	tatagaccgc	tggctctccc	gttgatcggt	cccggcggcg	3600
tctccaacag	gagacgcggg	ggatacaggg	gagaaggcct	gcgggaacgg	aggggtcgta	3660
cctctgcccc	tttccccatc	gttcacgggt	ggttttggag	acctagcaag	cttcgttccg	3720
agagagactg	tctcaaggga	gcgacgggct	cctgttggtt	ctcgcgcgcc	ggcctccgag	3780
aatcgggtgt	ggaagacctc	ggccagcggg	attacaggcg	agcccattag	atcctgaccg	3840
tcctcgcata	cgtagtcgtc	ttgtgttagc	tcttcgcca	catcttccgt	tctgggttct	3900
ggttgaagtc	ccgatacggg	gggaattgaa	acgatctcgt	gttcccgtcc	caccatgacc	3960
ccgttctctc	caaatagtag	atcgtcaggc	tgactcgagg	tgaccacccg	ggccctgtgt	4020
tcggcggccg	ccgcggccgc	gtccaacagg	tccattaact	ccaaagtatc	aggcgacccc	4080
gcgcgttggg	gtgtagagcg	ctgcacgggc	ggcgtatcca	tcgcactggg	gtgaatttag	4140
acgtacccga	gttttccaaa	cgtctctcga	gccttcaaag	gattgcgatt	gcggttggtg	4200
agggagttcc	aacagtactt	aaaacgtggt	gtgccccccc	ctcgaccgca	tatttcctcc	4260
ccgtgtcgtc	accgtgtaaa	tattcttaat	gataagacga	tgtagtgatt	ggacgagact	4320
cgaggcggga	agttcatgga	ccatagtatg	cgtttaagga	gagaccgctg	gttggcgatg	4380
tacgcccggg	gtctatttcc	gcatacctta	caacatcata	acaagggata	ccagacatgt	4440
gaatttcatt	tacatatggt	taaataacaa	ccaatcatcg	tgtgtctaca	gacgatatat	4500
aatatacata	aacacaattg	gggttgtctc	acatgcaaaa	catcttatat	aacacggggt	4560
gtttccaccc	atccggcatc	tagttaatca	aatgcacgtc	gacggtgtgt	ttgggtccct	4620
ctccgtcgtc	attacgttcg	cgcaatcaac	aagcgtatac	accaccaccc	ctcccaacga	4680
ttatgtcagg	cggcacgaag	cccgcgataa	cccataaaat	acacacgggg	ttgtggtggt	4740
cacgtaaccc	cccgccgatg	gggagggggc	gcggtacccc	gccgatgggg	agggggcgcg	4800
gtaccccgcc	gatggggagg	gggcgcggta	ccccgccgat	ggggaggggg	cgcggtaccc	4860
cgccgatggg	gagggggcgc	ggtaccccg	cgatgtttat	aaccataatt	ctctaaaccg	4920

ttgtagaaaa tcacaaaaaa atttattcaa aaacaagtcg aagaacttca tatctgaggc	4980
atgtaaaccg gtctgcactt cctgggggtgg aatgggggtgg ggtggggggg tgaaaaaggg	5040
gggggggttaa attggggtgc cgcattgtctg tgggtgtacgc caatcggata cactcttttg	5100
atctgcattc gcacttcccg ttttttccact gtatggggttt tcatgttttg gcatgtgtcc	5160
aaccaccgtt cgcactttct ttctatatat atatatatat atatatatat atatagagaa	5220
agagagagag tttcttggtc gcgcgtgttc ccgcgatgtc gcggttttat ggggtgtggg	5280
cgggcttttc acagaatata tatattccaa atggagcggc aggcttttta aaatcgattt	5340
gacgtgataa aaaaaaacac acggggcccc cccctttttt tgggtgttata aaggcaaccg	5400
aatcgaaggt ctcccgcccc ggaatcccc attgccattt tacccaagta gccttattca	5460
tagatgtaaa cgtttggtg tgtgttttgt tgtgcagggt tcgtccgatt cataacgcga	5520
cagcgtcgag tcggttttta gggaaaaggt tactacggcc ccaaggac atg ttt tgc	5577
	Met Phe Cys
	1
acc tca ccg gct acg cgg ggc gac tcg tcc gag tca aaa ccc ggg gca	5625
Thr Ser Pro Ala Thr Arg Gly Asp Ser Ser Glu Ser Lys Pro Gly Ala	
5 10 15	
tcg gtt gat gtt aac gga aag atg gaa tat gga tct gca cca gga ccc	5673
Ser Val Asp Val Asn Gly Lys Met Glu Tyr Gly Ser Ala Pro Gly Pro	
20 25 30 35	
ctg aac ggc cgg gat acg tcg cgg ggc ccc ggc gcg ttt tgt act ccg	5721
Leu Asn Gly Arg Asp Thr Ser Arg Gly Pro Gly Ala Phe Cys Thr Pro	
40 45 50	
ggt tgg gag atc cac ccg gcc agg ctc gtt gag gac atc aac cgt gtt	5769
Gly Trp Glu Ile His Pro Ala Arg Leu Val Glu Asp Ile Asn Arg Val	
55 60 65	
ttt tta tgt att gca cag tcg tcg gga cgc gtc acg cga gat tca cga	5817
Phe Leu Cys Ile Ala Gln Ser Ser Gly Arg Val Thr Arg Asp Ser Arg	
70 75 80	
aga ttg ccg cgc ata tgc ctc gac ttt tat cta atg ggt cgc acc aga	5865
Arg Leu Arg Arg Ile Cys Leu Asp Phe Tyr Leu Met Gly Arg Thr Arg	
85 90 95	
cag cgt ccc acg tta gcg tgc tgg gag gaa ttg tta cag ctt caa ccc	5913
Gln Arg Pro Thr Leu Ala Cys Trp Glu Glu Leu Leu Gln Leu Gln Pro	
100 105 110 115	
acc cag acg cag tgc tta cgc gct act tta atg gaa gtg tcc cat cga	5961
Thr Gln Thr Gln Cys Leu Arg Ala Thr Leu Met Glu Val Ser His Arg	
120 125 130	
ccc cct ccg ggg gaa gac ggg ttc att gag gcg ccg aat gtt cct ttg	6009
Pro Pro Arg Gly Glu Asp Gly Phe Ile Glu Ala Pro Asn Val Pro Leu	
135 140 145	

cat agg agc gca ctg gaa tgt gac gta tct gat gat ggt ggt gaa gac His Arg Ser Ala Leu Glu Cys Asp Val Ser Asp Asp Gly Gly Glu Asp 150 155 160	6057
gat agc gac gat gat ggg tct acg cca tcg gat gta att gaa ttt cgg Asp Ser Asp Asp Asp Gly Ser Thr Pro Ser Asp Val Ile Glu Phe Arg 165 170 175	6105
gat tcc gac gcg gaa tca tcg gac ggg gaa gac ttt ata gtg gaa gaa Asp Ser Asp Ala Glu Ser Ser Asp Gly Glu Asp Phe Ile Val Glu Glu 180 185 190 195	6153
gaa tca gag gag agc acc gat tct tgt gaa cca gac ggg gta ccc ggc Glu Ser Glu Glu Ser Thr Asp Ser Cys Glu Pro Asp Gly Val Pro Gly 200 205 210	6201
gat tgt tat cga gac ggg gat ggg tgc aac acc ccg tcc cca aag aga Asp Cys Tyr Arg Asp Gly Asp Gly Cys Asn Thr Pro Ser Pro Lys Arg 215 220 225	6249
ccc cag cgt gcc atc gag cga tac gcg ggt gca gaa acc gcg gaa tat Pro Gln Arg Ala Ile Glu Arg Tyr Ala Gly Ala Glu Thr Ala Glu Tyr 230 235 240	6297
aca gcc gcg aaa gcg ctc acc gcg ttg ggc gag ggg ggt gta gat tgg Thr Ala Ala Lys Ala Leu Thr Ala Leu Gly Glu Gly Gly Val Asp Trp 245 250 255	6345
aag cga cgt cga cac gaa gcc ccg cgc cgg cat gat ata ccg ccc ccc Lys Arg Arg Arg His Glu Ala Pro Arg Arg His Asp Ile Pro Pro Pro 260 265 270 275	6393
cat ggc gtg tag tctttataaaa taaataacaat ggtttggctc gtgtcttttt His Gly Val	6445
ttgatgtctg tctgtggggg agtgggggtgt tgtggatatt agagggtaga ggggtgctggt	6505
ttgaacgtct ccattaaccc acgggggtccc cacacggggcc gtgtggt atg aat ctc Met Asn Leu 280	6561
tgc gga tcc cgc ggt gag cac ccg ggc ggt gaa tat gcc gga ctt tac Cys Gly Ser Arg Gly Glu His Pro Gly Gly Glu Tyr Ala Gly Leu Tyr 285 290 295	6609
tgc aca cga cac gat acc ccc gcg cac cag gct ctc atg aac gac gcc Cys Thr Arg His Asp Thr Pro Ala His Gln Ala Leu Met Asn Asp Ala 300 305 310	6657
gaa cgg tac ttc gcc gcc gcg cta tgc gcc ata tct acc gag gcc tac Glu Arg Tyr Phe Ala Ala Ala Leu Cys Ala Ile Ser Thr Glu Ala Tyr 315 320 325	6705
gag gct ttt ata cac agc ccc tcc gag aga ccg tgc gcg agt ttg tgg Glu Ala Phe Ile His Ser Pro Ser Glu Arg Pro Cys Ala Ser Leu Trp 330 335 340 345	6753
ggg agg gca aag gac gcc ttc gga cgg atg tgc ggg gag ctc gca gcg Gly Arg Ala Lys Asp Ala Phe Gly Arg Met Cys Gly Glu Leu Ala Ala	6801

350	355	360	
gat aga caa cgt cca ccc tcg gtt ccg ccg atc cgc aga gcg gtg tta Asp Arg Gln Arg Pro Pro Ser Val Pro Pro Ile Arg Arg Ala Val Leu 365 370 375			6849
tcg tta tta cgc gag caa tgc atg ccg gat cca caa tcg cat ctg gag Ser Leu Leu Arg Glu Gln Cys Met Pro Asp Pro Gln Ser His Leu Glu 380 385 390			6897
ctc agc gag cgg ctg ata ttg atg gca tat tgg tgc tgt ttg gga cac Leu Ser Glu Arg Leu Ile Leu Met Ala Tyr Trp Cys Cys Leu Gly His 395 400 405			6945
gcc gga ctt ccg act att gga ttg tcg ccc gat aat aaa tgc atc cgc Ala Gly Leu Pro Thr Ile Gly Leu Ser Pro Asp Asn Lys Cys Ile Arg 410 415 420 425			6993
gcc gaa tta tat gac cgc ccc ggg gga att tgt cac agg ctt ttt gac Ala Glu Leu Tyr Asp Arg Pro Gly Gly Ile Cys His Arg Leu Phe Asp 430 435 440			7041
gcg tac ctg ggc tgc ggg tcc ctt gga gtc cca aga acc tac gag aga Ala Tyr Leu Gly Cys Gly Ser Leu Gly Val Pro Arg Thr Tyr Glu Arg 445 450 455			7089
tcc tga caccatcc ctttatatag aaaaaaaaaa taaatttaaa acatacaccg Ser			7145
gataaaagcg tactgttttt tatttaaatt tacacgctcg gcgttgcccc ggttcggtga			7205
tcaccggggtc ttatctatat acaccgtgta actcgaaccc ccgtgactcc ctccaatcgc			7265
gttaccaaac tcttcttccg tatccgtaga ttccgagtc tcgaaatcgt ccactggaag			7325
gccagcgtaa tacatgcttt gggtatacgg ggacttgtct accctatagg ctttaaccct			7385
cattcgttta gccgtacaga ttaaaaatat tacgagacat aaaagtacta ctgctgcaag			7445
ccctccgggtc catgcggcat atcgtagaag tggtgacgtt ccgggggttta cgggggtaat			7505
ttccttgggt ttagtagtcg ccggtggctg accggccgtt ggcggaaatc cacgctcttc			7565
aattgcgttt acaaaatgat ctactgtgga tacaacagtg tatgctacgg cttcaacatg			7625
cccgttaaaa tacaccacaa aaacgtataa tcccgacaaa ctctcgggtg tatctacaaa			7685
ctttaacgtg gtgccccgt cgtgtaagat tagaccaaag ctaggctcca tatgagatat			7745
tcccagacaa tatgcggtgt agttatctgc atgttcacaa ttttgatata ctgtgcttgc			7805
aacacgctgg gctaaatgtg gcgaggtaaa tgtacaaccg gaattcatat gagagaggca			7865
ttgggggtgcg ttgggatgat acaaacacgt agaataaac cgcattgggt gacatgtagg			7925
atcgatgggg acatacaacc actctaacag caaatcaaat ggcgcttcac gtatcttata			7985
ctgaagatgc attgccaagc taaacgtatc accaactgaa aatacatgcg agtggttaatt			8045

ccacatatga aactcagccc ctcttggttg aggagttact gcgggtag ggtttcttgt	8105
tttttcatcc cctttccagg tgaccaaaaa cgtggcgtag gtagacgtac catcggagcc	8165
gcgcatgttc caaatgtaca cacccaagta ttgtttttct gtccgaagta ctttcaagac	8225
accggttca atctcggggg ggtctaattc gagttcatca aacagtgtgc tcgtgtttac	8285
aacaatccac ggttggtccg cttccttctt acctgaaaa cggtaactga tttcggccaa	8345
ctgacacctt ttagtatattt ccgcgcaatc cacatccacc accacgtctt gaaagcatgt	8405
tgtatgtttt aaacatatat gctggatggc gggcgtgcg tctcccgtac aggttaatga	8465
cggcaaaaag ctccaagtct cgggtgtaccg gactccataa atccgctgaa tcggtgcgcg	8525
taaagtaaac gggtgatttt cttccactga cacctcaatg agtctttggc cttgggggttt	8585
tggattaaga tctcctttaa acacgtcacc gtattgacgt tgggtccacat ttacaatttt	8645
atgtctgtca tcgcggttta acgtagggat aacgtggatg cccgtatcgt cccaagatc	8705
ctcctgtgca gacatttgtg tgggttgcac taaccgttcc ccgctatcga taccacggcc	8765
ctgattatac accccatggt gttcgtgtgc gttctctaaa aatccatcat aatcattacg	8825
tggccatata taagggtgagt tatgatcgta cgcttttcgc gaagactctc cccgatttac	8885
ccatgaagac tccgcatgat ctgaatggta gtaaggctca tatacggagt ttgtatccag	8945
tttgtcttca tcggtgtgaa aatcatcgta tcgcaagacg gatgctctga ccggattcgt	9005
tatacgcaac gttcccgtga taattccgaa ccccatcaat acccccacca caggtttatt	9065
aactgtcccc atattacagg cgaccctcgg aatatagtca cttaaaacca cgcaattcgc	9125
ccgaggtcta aaaccatgga ctgctctcgt gtataccagc tcggccttta aggcttcata	9185
aaacatcccc gcccaaattg gggcgtgtta acttatagtt aggagattct taatccttcc	9245
cctcatatca caacgcgtaa tcaaaacgct aaataaaacg catatagttt atttaataa	9305
aatccggga taattagttc tatttaacaa acgggtttac aacggaatgt gggggggatt	9365
cttcgcgaat cgttgctagt tgtgcaatgg cggcctccaa catcacatcg gattctggtg	9425
tcgcattttg tatgcccctt cttgtttttg tatttgggcg ataaattgga tgttttttaa	9485
ttctacgtcg cttaacgctt attacaataa caataaccat ggcggtgagg atcatgacag	9545
acgctactat aggaataatt ataagtagat tttctggagg atcattaagg gacttttcgg	9605
gtaacgtgga catatccgtt ggatatacgt gatttttctat cccctcctta acaacggact	9665
tagtttctgt cgtaacaacg tcctcatgta accaagggtt atcctctaac gatttaccgg	9725
cacgaagatc aagcatatgt tgaaacaggg aggtaccgga ccctttgggt gtcgcgggta	9785
aatcacacaa acgagcttgt tgaaaaaggg ctcttgtaga atatccattc tgtagagacg	9845

gagaagtgta	gataaccccg	tgaatgttgt	gatgcgagcc	cgctgtatat	acattttacac	9905
caagaatgaa	accatcggtg	gatctgctat	ggtctaaccg	aacaagaagt	acatacacac	9965
cagcatcatt	tattcccggg	ttggtaattt	tcaacattac	accagcatcc	ggctctgttg	10025
atatccgac	cgttgagtta	ccataatgcc	acgaatgttt	gtacctacac	gaaataaaaag	10085
cgctcgttct	aatccgggga	catccgtcgt	atcttattac	ttgtactgac	cggaaacaaa	10145
acgccaccgt	atccgcgtat	aacagttcca	gtgttccgct	atagtttgtc	ccggtaggta	10205
gttgctctcc	aataaagaca	agctgtcctt	ttatctctgt	ataattatca	ttttgcatgg	10265
gaataaggat	agacgtgaga	ctgctgttaa	cttgcaagct	cacgtggctg	cccttgaaga	10325
tcaaagcgtt	ggtcacttgt	atgtaaaata	taacggccga	tatcaaacat	tggattaaaa	10385
acatcgcgat	taaatgaggc	gcaccagtat	acccaactac	accgaagagc	agctctgtga	10445
gccgggggag	gggacgcttt	tcagcgctac	tacaatgtta	agaaaatgat	cccgtgtttt	10505
atccttggtg	taatggggcg	tgactctgta	ttaagtttct	attggttatg	ttattttatat	10565
tagtatttca	aaacattgcg	cgtttgtacc	ctatttgcct	taacgggtta	tacgttataa	10625
acacaattta	tacaatat	tattaacagg	cttaatgaat	tttaatctcc	aacttccatt	10685
ggatttggat	atggatcggg	aagagtttgg	aaaacagagt	ggttaagcaa	cacctctgct	10745
gatggtcgat	gacgtgcgtc	aaacgataac	atcttacata	tcaaatactc	caaatcaatt	10805
ggcaactcat	atagatttgt	ccacaatggc	ctggatccgg	gttttcgaga	agaccgtttt	10865
gccaaaccaa	tgtattgtcg	acgaagattt	gatgtagggg	taatgggaaa	ttcattggga	10925
tgagttccag	atcgtcgtat	aataagttta	atttgacgct	cactgtcaca	attgccatct	10985
aaaccgtctc	gttcaaataa	cgagttctgt	cctgtagcca	tttcaaataa	tacaatcccg	11045
gcactccata	tgtccacggc	aggtccatat	ggatctctag	ccaataactc	aggagagttt	11105
gtggcgattg	ttccagccca	gccataatac	ctgttggcat	taatatccac	ggggaaacac	11165
gctgctccaa	agtctccac	acaaacatca	cctgggtggg	taataaatat	attttcagat	11225
tttatatcac	ggtgaataat	actgttatta	tgaagatact	gtaacgcgcg	taatacagat	11285
cgctgaattg	ctaaaatgtc	acatatgggg	aggttgcgct	ttgcagctag	atagcagtat	11345
aaatctgttc	ggtaacgtgg	taatataaga	catgtcattt	tgttatacgt	aaacgttcct	11405
ttaagctgta	caacggatgg	gtgggttaac	gctcttaaca	cggttgcctc	ggtggccggt	11465
ccttgacgtt	gacccgcttt	aatgaccaca	tggtcacatg	ttttactgtc	catacacgca	11525
aacgcaaaac	cttccgcccc	tggtgtaaac	gtttttaata	ttacaaatcc	cgctttatta	11585
attccaacgc	gtgcttctgc	gcacaatgcc	acagaggcct	cggcttcagt	ttcgtgtaca	11645

ccatcaaata tattaaga ctgtatatcc atgttaacgt cataattggg atcatcctca 11705
gattctatgc cgggcgacat ttcaactgga aacatctggt gtataaaccc acatgtttgc 11765
ataatatgtg acggtgatgt tgagatggcg ccacggaact ttccttgtcc aacaaagggtg 11825
tctgttgcac caacgtcggt cattatactt gtataccccg acttatgttg atagtgttaa 11885
tgaacaaaaa acctgttgtc caacaactgt acaaaatata ctcaccgaca cacttataaa 11945
gtgatccgat tataagaggg cggagataat gacaaaaagg ggaggggtta aacataactt 12005
acaaatatgg atttgattgt tcctaggatt attaataatg tctacatggt ttattttaata 12065
ataacgtaag gtaactttac ctctttgtga gaatgtcggg atagctgaca acgtttatga 12125
aaacgcgctt taaacgacct attgatgaat aatctagaat cttgcatgta tataaatatc 12185
aaaagggtgtg gtattaaaca cttttaaaact agcctgctgg ccttacaatc tggatttct 12244
atg gcc gga caa aac acc atg gag ggt gag gcc gtg gcc tta ctg atg 12292
Met Ala Gly Gln Asn Thr Met Glu Gly Glu Ala Val Ala Leu Leu Met
460 465 470
gaa gcg gtg gta acc ccg cga gcg caa cca aat aat aca acg ata aca 12340
Glu Ala Val Val Thr Pro Arg Ala Gln Pro Asn Asn Thr Thr Ile Thr
475 480 485 490
gcc ata caa ccg agc cgt tcg gct gaa aag tgt tat tat agt gat agc 12388
Ala Ile Gln Pro Ser Arg Ser Ala Glu Lys Cys Tyr Tyr Ser Asp Ser
495 500 505
gaa aat gaa acg gca gat gaa ttt ttg cgt cga att gga aaa tat caa 12436
Glu Asn Glu Thr Ala Asp Glu Phe Leu Arg Arg Ile Gly Lys Tyr Gln
510 515 520
cat aaa ata tat cat cgt aaa aaa ttc tgt tat att acg cta ata att 12484
His Lys Ile Tyr His Arg Lys Lys Phe Cys Tyr Ile Thr Leu Ile Ile
525 530 535
gtc ttt gta ttt gct atg acg gga gcg gcc ttt gcc ttg gga tat ata 12532
Val Phe Val Phe Ala Met Thr Gly Ala Ala Phe Ala Leu Gly Tyr Ile
540 545 550
acg tca caa ttt gtt gga taa gtggacgatt tcgaggactc ggaatctacg 12583
Thr Ser Gln Phe Val Gly
555 560
gatacggaag aagagtttgg taacgcgatt ggagggagtc acgggggttc gagttacacg 12643
gtgtatatag ataagacccg gtgatcaccg aaccggggca acgccgagcg tgtaaattta 12703
aataaaaaac agtacgcttt tatccggtgt atgtttttaa tttatttttt ttttctatat 12763
aaagggatgg ggtgtcagga tctctcgtag gttcttggga ctccaaggga cccgcagccc 12823
aggtacgcgt caaaaagcct gtgacaaatt cccccggggc ggtcatataa ttcggcgcg 12883
atgcatttat tatcgggcga caatccaata gtcggaagtc cggcgtgtcc caaacagcac 12943

caatatgcca	tcaatatcag	ccgctcgctg	agctccagat	gcgattgtgg	atccggcatg	13003
cattgctcgc	gtaataacga	taacaccgct	ctgcggatcg	gcggaaccga	gggtggacgt	13063
tgtctatccg	ctgcgagctc	cccgcacatc	cgtccgaagg	cgtcctttgc	cctccccac	13123
aaactcgcgc	acggtctctc	ggaggggctg	tgtataaaag	cctcgtaggc	ctcggtagat	13183
atggcgcata	gcgcggcggc	gaagtaccgt	tccggcgtcg	tcatgagagc	ctggtgcgcg	13243
ggggtatcgt	gtcgtgtgca	gtaaagtccg	gcatattcac	cgcgcgggtg	ctcaccgcgg	13303
gatccgcaga	gattcatacc	acacggcccc	tgtggggacc	ccgtgggtta	atggagacgt	13363
tcaaaccagc	accctctacc	ctctaataatc	cacaacaccc	cactccccca	cagacagaca	13423
tcaaaaaaag	acacgagcca	aaccattgta	tttatattata	aagactacac	gccatggggg	13483
ggcggtatat	catgccggcg	cggggcttcg	tgtcgacgtc	gcttccaatc	tacaccccc	13543
tcgccaacg	cggtgagcgc	tttcgcggct	gtatatccg	cggtttctgc	acccgcgtat	13603
cgtcgtatgg	cacgctgggg	tctctttggg	gacggggtgt	tgcacccatc	cccgtctcga	13663
taacaatcgc	cgggtacccc	gtctgggttca	caagaatcgg	tgctctcctc	tgattcttct	13723
tccactataa	agtcttcccc	gtccgatgat	tccgcgtcgg	aatccccgaa	ttcaattaca	13783
tccgatggcg	tagacccatc	atcgtogeta	tcgtcttcac	caccatcatc	agatacgtca	13843
cattccagtg	cgtcctatg	caaaggaaca	ttcggcgcct	caatgaacce	gtcttcccc	13903
cagagggggtc	gatgggacac	ttccattaaa	gtagcgcgta	agcactgcgt	ctgggtgggt	13963
tgaagctgta	acaattcctc	ccagcacgct	aacgtgggac	gctgtctggt	gcgaccatt	14023
agataaaagt	cagggcatat	gcgccgcaat	cttcgtgaat	ctcgcgtgac	gcgtccccgac	14083
gactgtgcaa	tacataaaaa	aacacggttg	atgtcctcaa	cagacctggc	cgggtggatc	14143
tcccaacccg	gagtacaaaa	cgcgccgggg	ccccgcgacg	tatccccggc	gttcaggggt	14203
cctggtgcag	atccatattc	catctttccg	ttaacatcaa	ccgatgcccc	gggttttgac	14263
tcggacgagt	cgcgccgcgt	agccggtgag	gtgcaaaaca	tgtccttggg	gccgtagtaa	14323
ccttttccct	taaaaccgac	tcgacgctgt	cgcgttatga	atcggacgaa	ccctgcacaa	14383
caaaacacac	acccaaacgt	ttacatctat	gaataaggct	acttgggtaa	aatggcaatg	14443
ggggattccg	gggcgggaga	ccttcgattg	ggttgccttt	ataacaccaa	aaaaaggggg	14503
gggccccgtg	tggttttttt	tatcacgtca	aatcgatttt	aaaaagcctg	ccgctccatt	14563
tggaatatat	atattctgtg	aaaagccgcg	ccacacccca	taaaaccgcg	acatcgcggg	14623
aacacgcgcg	aacaagaaac	tctctctctt	tctctatata	tatatatata	tatatatata	14683
tatatagaaa	gaaagtgcga	acggtgggtg	gacacatgcc	aaaacatgaa	aaccataca	14743

gtgaaaaaac gggaagtgcg aatgcagatc aaaagagtgt atccgattgg cgtacaccac 14803
 agacatgcgg acgcccatt taaccccccc cctttttcac cccccaccc caccattc 14863
 cccccagga agtgcgaacg gggttacatg cctcagatat gaagttcttc gacttgtttt 14923
 tgaataaatt tttttgtgat tttctacaac gggttagaga attatgggta taaacatcgg 14983
 cggggtaccg cgccccctcc ccatcggcgg ggtaccgcgc cccctcccca tcggcggggt 15043
 accgcgcccc ctccccatcg gcgggggtacc gcgccccctc cccatcggcg gggtaccgcg 15103
 cccctccccc atcggcgggg gggtacgtga acaccacaac cccgtgtgta ttttatgggt 15163
 tatcgcgggc ttcgtgccgc ctgacataat cgttgggagg ggtgggtggtg tatacgcttg 15223
 ttgattgcgc gaacgtaatg acgacggaga gggacccaaa cacaccgtcg acgtgcattt 15283
 gattaactag atgccggatg ggtggaaaca acccgtgtta tataagatgt tttgcatgtg 15343
 agacaacccc aattgtgttt atgtatatta tatatcgtct gtagacacac gatgattgggt 15403
 tgttatttaa acatatgtaa atgaaattca catgtctggt atcccttggt atgatgttgt 15463
 aaggtatgcg gaaatagaca ccgggcgtac atcgccaacc agcgggtctct ccttaaacgc 15523
 atactatgggt ccatgaactt cccgcctcga gtctcgtcca atcactacat cgtcttatca 15583
 ttaagaatat ttacacgggtg acgacacggg gaggaatat gcggtcgagg ggggggcaca 15643
 acacgtttta agtactgttg gaactccctc accaaccgca atcgcaatcc tttgaaggct 15703
 gcgagagcgt ttggaaaact cgggtacgtc taaattcacc ccagtgcg atg gat acg 15760
 Met Asp Thr

ccg ccg atg cag cgc tct aca ccc caa cgc gcg ggg tcg cct gat act 15808
 Pro Pro Met Gln Arg Ser Thr Pro Gln Arg Ala Gly Ser Pro Asp Thr
 565 570 575

ttg gag tta atg gac ctg ttg gac gcg gcc gcg gcg gcc gcc gaa cac 15856
 Leu Glu Leu Met Asp Leu Leu Asp Ala Ala Ala Ala Ala Glu His
 580 585 590 595

agg gcc cgg gtg gtc acc tcg agt cag cct gac gat cta cta ttt gga 15904
 Arg Ala Arg Val Val Thr Ser Ser Gln Pro Asp Asp Leu Leu Phe Gly
 600 605 610

gag aac ggg gtc atg gtg gga cgg gaa cac gag atc gtt tca att ccc 15952
 Glu Asn Gly Val Met Val Gly Arg Glu His Glu Ile Val Ser Ile Pro
 615 620 625

tcc gta tcg gga ctt caa cca gaa ccc aga acg gaa gat gtt ggc gaa 16000
 Ser Val Ser Gly Leu Gln Pro Glu Pro Arg Thr Glu Asp Val Gly Glu
 630 635 640

gag cta aca caa gac gac tac gta tgc gag gac ggt cag gat cta atg 16048
 Glu Leu Thr Gln Asp Asp Tyr Val Cys Glu Asp Gly Gln Asp Leu Met
 645 650 655

ggc tcg cct gta atc ccg ctg gcc gag gtc ttc cac acc cga ttc tcg Gly Ser Pro Val Ile Pro Leu Ala Glu Val Phe His Thr Arg Phe Ser 660 665 670 675	16096
gag gcc ggc gcg cga gaa cca aca gga gcc gat cgc tcc ctt gag aca Glu Ala Gly Ala Arg Glu Pro Thr Gly Ala Asp Arg Ser Leu Glu Thr 680 685 690	16144
gtc tct ctc gga acg aag ctt gct agg tct cca aaa cca ccg atg aac Val Ser Leu Gly Thr Lys Leu Ala Arg Ser Pro Lys Pro Pro Met Asn 695 700 705	16192
gat ggg gaa acg ggc aga ggt acg acc cct ccg ttc ccg cag gcc ttc Asp Gly Glu Thr Gly Arg Gly Thr Thr Pro Pro Phe Pro Gln Ala Phe 710 715 720	16240
tcc cct gta tcc ccc gcg tct cct gtt gga gac gcc gcc ggg aac gat Ser Pro Val Ser Pro Ala Ser Pro Val Gly Asp Ala Ala Gly Asn Asp 725 730 735	16288
caa cgg gaa gac cag ccg tct ata ccc cga caa acg acg aga gga aat Gln Arg Glu Asp Gln Arg Ser Ile Pro Arg Gln Thr Thr Arg Gly Asn 740 745 750 755	16336
tca cca ggt ttg ccg tcg gtg gtc cat cga gac aga caa act cag tcc Ser Pro Gly Leu Pro Ser Val Val His Arg Asp Arg Gln Thr Gln Ser 760 765 770	16384
atc tcg ggt aaa aag ccg ggc gat gag caa gcg ggt cat gcg cat gca Ile Ser Gly Lys Lys Pro Gly Asp Glu Gln Ala Gly His Ala His Ala 775 780 785	16432
tcg ggg gac gga gta gtt ctc cag aaa act caa cgg ccc gct cag gga Ser Gly Asp Gly Val Val Leu Gln Lys Thr Gln Arg Pro Ala Gln Gly 790 795 800	16480
aag agc ccg aag aaa aag act ttg aag gtt aag gtc cca ctc ccg gcg Lys Ser Pro Lys Lys Lys Thr Leu Lys Val Lys Val Pro Leu Pro Ala 805 810 815	16528
cgg aaa ccc ggt gga cct gta ccc ggc ccg gtt gag caa ttg tac cac Arg Lys Pro Gly Gly Pro Val Pro Gly Pro Val Glu Gln Leu Tyr His 820 825 830 835	16576
gtc ctt tcg gac agc gtt ccc gct aag ggg gca aag gcg gac ctg ccg Val Leu Ser Asp Ser Val Pro Ala Lys Gly Ala Lys Ala Asp Leu Pro 840 845 850	16624
ttt gag acc gat gat acc cgc cca agg aaa cat gat gcc cgg ggt ata Phe Glu Thr Asp Asp Thr Arg Pro Arg Lys His Asp Ala Arg Gly Ile 855 860 865	16672
aca cct cgc gtc cct gga cgt tcg tcg ggg ggc aaa cct aga gcg ttt Thr Pro Arg Val Pro Gly Arg Ser Ser Gly Gly Lys Pro Arg Ala Phe 870 875 880	16720
ttg gcc ctg ccg gga aga tcc cac gca cca gac ccg att gag gat gac Leu Ala Leu Pro Gly Arg Ser His Ala Pro Asp Pro Ile Glu Asp Asp 885 890 895	16768

agc cca gtg gag aaa aag cca aag agt cgt gag ttt gtt tcg tct tca Ser Pro Val Glu Lys Lys Pro Lys Ser Arg Glu Phe Val Ser Ser Ser 900 905 910 915	16816
tcc tct tcc tcg tcg tgg gga tcg tca tcg gag gat gaa gac gat gaa Ser Ser Ser Ser Ser Trp Gly Ser Ser Ser Glu Asp Glu Asp Asp Glu 920 925 930	16864
ccc cgg cgc gtt tcg gtg gga agt gaa act aca ggc agc agg tcc gga Pro Arg Arg Val Ser Val Gly Ser Glu Thr Thr Gly Ser Arg Ser Gly 935 940 945	16912
cgc gaa cac gcc cct tcc ccg tca aat tcg gat gat tcg gac tca aat Arg Glu His Ala Pro Ser Pro Ser Asn Ser Asp Asp Ser Asp Ser Asn 950 955 960	16960
gat ggt ggg tcg acg aaa caa aat atc caa ccg gga tat cga tcc atc Asp Gly Gly Ser Thr Lys Gln Asn Ile Gln Pro Gly Tyr Arg Ser Ile 965 970 975	17008
agc ggt ccc gat ccg agg att cgt aag acc aaa cgt ctt gcg ggg gaa Ser Gly Pro Asp Pro Arg Ile Arg Lys Thr Lys Arg Leu Ala Gly Glu 980 985 990 995	17056
ccg ggg cgc cag aga cag aaa tca ttt tcc ctg ccg cga tcc aga Pro Gly Arg Gln Arg Gln Lys Ser Phe Ser Leu Pro Arg Ser Arg 1000 1005 1010	17101
acc ccg ata att ccc ccg gtg tcg ggg ccg ctc atg atg ccc gac Thr Pro Ile Ile Pro Pro Val Ser Gly Pro Leu Met Met Pro Asp 1015 1020 1025	17146
gga agc cct tgg ccc gga tcg gca ccc ctc cca tcc aac agg gtg Gly Ser Pro Trp Pro Gly Ser Ala Pro Leu Pro Ser Asn Arg Val 1030 1035 1040	17191
cgg ttt gga ccg tcc ggg gag acc aga gag ggt cac tgg gag gat Arg Phe Gly Pro Ser Gly Glu Thr Arg Glu Gly His Trp Glu Asp 1045 1050 1055	17236
gag gct gtg aga gcg gcg cgg gct cgt tac gag gcc tca acg gaa Glu Ala Val Arg Ala Ala Arg Ala Arg Tyr Glu Ala Ser Thr Glu 1060 1065 1070	17281
ccc gtg ccg ctt tac gtg ccg gag ttg gga gat ccg gct aga cag Pro Val Pro Leu Tyr Val Pro Glu Leu Gly Asp Pro Ala Arg Gln 1075 1080 1085	17326
tac cgc gcg ctg att aac ctg atc tac tgt cca gac aga gac cct Tyr Arg Ala Leu Ile Asn Leu Ile Tyr Cys Pro Asp Arg Asp Pro 1090 1095 1100	17371
ata gca tgg ctc cag aac ccc aag ctg acc ggt gtc aac tcg gcc Ile Ala Trp Leu Gln Asn Pro Lys Leu Thr Gly Val Asn Ser Ala 1105 1110 1115	17416
ctg aac cag ttc tac caa aag ctg ttg cca ccg gga cgg gcg ggt Leu Asn Gln Phe Tyr Gln Lys Leu Leu Pro Pro Gly Arg Ala Gly 1120 1125 1130	17461

acc gcc gtt acg ggg agc gta gcg tct ccc gtt ccg cat gta ggc	17506
Thr Ala Val Thr Gly Ser Val Ala Ser Pro Val Pro His Val Gly	
1135 1140 1145	
gaa gcc atg gcc acg ggg gag gcc ctc tgg gct ctc ccc cac gcg	17551
Glu Ala Met Ala Thr Gly Glu Ala Leu Trp Ala Leu Pro His Ala	
1150 1155 1160	
gcc gcg gcc gtg gct atg agc cgt cga tac gac ccg gcc caa aaa	17596
Ala Ala Ala Val Ala Met Ser Arg Arg Tyr Asp Arg Ala Gln Lys	
1165 1170 1175	
cac ttt atc cta cag agt ctc cgc aga gcc ttt gcc agc atg gca	17641
His Phe Ile Leu Gln Ser Leu Arg Arg Ala Phe Ala Ser Met Ala	
1180 1185 1190	
tac ccc gag gca acg ggc tcc agt ccg gcg gcg ccg atc tcc cgc	17686
Tyr Pro Glu Ala Thr Gly Ser Ser Pro Ala Ala Arg Ile Ser Arg	
1195 1200 1205	
ggt cac cct tct cca aca acc ccg gcc aca cag gct ccc gac cct	17731
Gly His Pro Ser Pro Thr Thr Pro Ala Thr Gln Ala Pro Asp Pro	
1210 1215 1220	
cag ccg tcg gcc gcc gca cgc tct ctt tct gtg tgt cca ccg gat	17776
Gln Pro Ser Ala Ala Ala Arg Ser Leu Ser Val Cys Pro Pro Asp	
1225 1230 1235	
gat cgt tta cga act ccg cgc aag cgc aag tcc cag cca gtc gag	17821
Asp Arg Leu Arg Thr Pro Arg Lys Arg Lys Ser Gln Pro Val Glu	
1240 1245 1250	
agc aga agc ctc ctc gac aag att agg gag aca ccc gtc gcg gac	17866
Ser Arg Ser Leu Leu Asp Lys Ile Arg Glu Thr Pro Val Ala Asp	
1255 1260 1265	
gcc ccg gtt gca gac gat cat gtg gtt tcc aag gcc aag agg ccg	17911
Ala Arg Val Ala Asp Asp His Val Val Ser Lys Ala Lys Arg Arg	
1270 1275 1280	
gta tcc gag ccc gtg acc atc acc tcg ggc cct gtg gtg gat ccc	17956
Val Ser Glu Pro Val Thr Ile Thr Ser Gly Pro Val Val Asp Pro	
1285 1290 1295	
ccc gcc gta ata acg atg cca ctt gac gga ccg gcc cca aac ggg	18001
Pro Ala Val Ile Thr Met Pro Leu Asp Gly Pro Ala Pro Asn Gly	
1300 1305 1310	
gga ttt ccg cgt att ccc ccg ggg gcc ctg cat acc ccg gtc ccg	18046
Gly Phe Arg Arg Ile Pro Arg Gly Ala Leu His Thr Pro Val Pro	
1315 1320 1325	
tcg gac cag gct cgc aag gcg tac tgt acc ccc gaa acc atc gcc	18091
Ser Asp Gln Ala Arg Lys Ala Tyr Cys Thr Pro Glu Thr Ile Ala	
1330 1335 1340	
cgt ctg gtc gac gac cca ttg ttt ccc acg gcc tgg cgc cct gcg	18136
Arg Leu Val Asp Asp Pro Leu Phe Pro Thr Ala Trp Arg Pro Ala	
1345 1350 1355	

cta agc ttt gat ccc ggc gcc ttg gcg gaa atc gcc gct cgg cgt	18181
Leu Ser Phe Asp Pro Gly Ala Leu Ala Glu Ile Ala Ala Arg Arg	
1360 1365 1370	
ccg ggc gga gga gac cga cgg ttt ggt cca ccc agc gga gtg gag	18226
Pro Gly Gly Gly Asp Arg Arg Phe Gly Pro Pro Ser Gly Val Glu	
1375 1380 1385	
gcg ctg cga cgg agg tgc gcc tgg atg cgg cag atc cca gac ccg	18271
Ala Leu Arg Arg Arg Cys Ala Trp Met Arg Gln Ile Pro Asp Pro	
1390 1395 1400	
gag gat gtg agg ctt ctg atc atc tac gat ccg ttg ccc gga gag	18316
Glu Asp Val Arg Leu Leu Ile Ile Tyr Asp Pro Leu Pro Gly Glu	
1405 1410 1415	
gac atc aac ggc ccc ctc gag agc acc ctc gcg aca gat ccg gga	18361
Asp Ile Asn Gly Pro Leu Glu Ser Thr Leu Ala Thr Asp Pro Gly	
1420 1425 1430	
ccg tca tgg agt cca tcc cga ggg gga ctg tct gtg gtc ctg gca	18406
Pro Ser Trp Ser Pro Ser Arg Gly Gly Leu Ser Val Val Leu Ala	
1435 1440 1445	
gcc ctg agt aac cgg ttg tgc ctg ccg agc act cat gcc tgg gcc	18451
Ala Leu Ser Asn Arg Leu Cys Leu Pro Ser Thr His Ala Trp Ala	
1450 1455 1460	
ggg aac tgg acc ggc ccg ccg gac gtg tcc gct ttg aac gcc cgg	18496
Gly Asn Trp Thr Gly Pro Pro Asp Val Ser Ala Leu Asn Ala Arg	
1465 1470 1475	
ggc gtt tta tta ctg tcg acc cga gac ctg gcc ttt gcc ggg gcc	18541
Gly Val Leu Leu Leu Ser Thr Arg Asp Leu Ala Phe Ala Gly Ala	
1480 1485 1490	
gtc gag tat cta ggc tcg cgg ttg gcc tct gcc cgg cgc cgg ttg	18586
Val Glu Tyr Leu Gly Ser Arg Leu Ala Ser Ala Arg Arg Arg Leu	
1495 1500 1505	
ctg gtg ttg gac gcg gtg gcc ctc gag agg tgg ccc agg gat gga	18631
Leu Val Leu Asp Ala Val Ala Leu Glu Arg Trp Pro Arg Asp Gly	
1510 1515 1520	
ccc gct ttg tct cag tat cac gtg tac gtc ccg gcc ccg gcg cga	18676
Pro Ala Leu Ser Gln Tyr His Val Tyr Val Arg Ala Pro Ala Arg	
1525 1530 1535	
ccg gac gcc cag gcc gtc gtc cga tgg cca gac tcg gcg gtc aca	18721
Pro Asp Ala Gln Ala Val Val Arg Trp Pro Asp Ser Ala Val Thr	
1540 1545 1550	
gaa gga ctc gcc cgg gcc gtg ttt gca tcg tcg cgc acc ttt ggg	18766
Glu Gly Leu Ala Arg Ala Val Phe Ala Ser Ser Arg Thr Phe Gly	
1555 1560 1565	
cca gcg agt ttt gct cgt atc gag act gcg ttt gcc aac ctg tac	18811
Pro Ala Ser Phe Ala Arg Ile Glu Thr Ala Phe Ala Asn Leu Tyr	
1570 1575 1580	

ccg ggc gaa caa ccc	ctg tgt ttg tgc cgc	ggg ggg aac gtc gca	18856
Pro Gly Glu Gln Pro	Leu Cys Leu Cys Arg	Gly Gly Asn Val Ala	
1585	1590	1595	
tac acc gtg tgt acc	cgc gcg ggc ccc aag	acc cgc gtc ccc ctg	18901
Tyr Thr Val Cys Thr	Arg Ala Gly Pro Lys	Thr Arg Val Pro Leu	
1600	1605	1610	
tcg ccc cgt gaa tac	cgg cag tac gtg ctg	ccg ggt ttt gac ggt	18946
Ser Pro Arg Glu Tyr	Arg Gln Tyr Val Leu	Pro Gly Phe Asp Gly	
1615	1620	1625	
tgc aag gac ctc gcg	cga cag tct cgg ggt	ctg ggg ctc ggg gca	18991
Cys Lys Asp Leu Ala	Arg Gln Ser Arg Gly	Leu Gly Leu Gly Ala	
1630	1635	1640	
gcc gac ttt gtg gac	gag gcg gca cat agc	cac cgc gca gca aac	19036
Ala Asp Phe Val Asp	Glu Ala Ala His Ser	His Arg Ala Ala Asn	
1645	1650	1655	
cga tgg ggc ctg ggt	gcc gcg ctt cga ccc	gtc ttc ctt ccc gag	19081
Arg Trp Gly Leu Gly	Ala Ala Leu Arg Pro	Val Phe Leu Pro Glu	
1660	1665	1670	
gga cgg aga ccg ggg	gcc gcc ggg ccg gag	gcc ggc gac gta ccc	19126
Gly Arg Arg Pro Gly	Ala Ala Gly Pro Glu	Ala Gly Asp Val Pro	
1675	1680	1685	
acc tgg gcg agg gtg	ttt tgc cgc cac gcc	ctg ctg gaa ccc gac	19171
Thr Trp Ala Arg Val	Phe Cys Arg His Ala	Leu Leu Glu Pro Asp	
1690	1695	1700	
cct gcc gca gaa cca	ctc gtg ctt cca ccc	gtg gcc ggt cgg tcg	19216
Pro Ala Ala Glu Pro	Leu Val Leu Pro Pro	Val Ala Gly Arg Ser	
1705	1710	1715	
gtg gcg ctg tat gcg	tcg gcg gac gag gct	cgg aat gcc ctc ccc	19261
Val Ala Leu Tyr Ala	Ser Ala Asp Glu Ala	Arg Asn Ala Leu Pro	
1720	1725	1730	
ccg att ccc aga gta	atg tgg ccg ccc ggt	ttt ggg gcc gcg gag	19306
Pro Ile Pro Arg Val	Met Trp Pro Pro Gly	Phe Gly Ala Ala Glu	
1735	1740	1745	
acg gtg ttg gag ggg	agc gac gga aca cgg	ttc gtg ttc gga cac	19351
Thr Val Leu Glu Gly	Ser Asp Gly Thr Arg	Phe Val Phe Gly His	
1750	1755	1760	
cac ggg ggc tcg gaa	cgg ccg tca gaa acc	cag gcg ggg cga cag	19396
His Gly Gly Ser Glu	Arg Pro Ser Glu Thr	Gln Ala Gly Arg Gln	
1765	1770	1775	
cgg cgc acc gca gac	gac aga gaa cac gct	ttg gag ctg gac gat	19441
Arg Arg Thr Ala Asp	Asp Arg Glu His Ala	Leu Glu Leu Asp Asp	
1780	1785	1790	
tgg gag gtg ggg tgt	gaa gac gcg tgg gac	agc gag gag ggg ggc	19486
Trp Glu Val Gly Cys	Glu Asp Ala Trp Asp	Ser Glu Glu Gly Gly	
1795	1800	1805	

ggg gac gac ggg gac gca ccg ggg tca tcc ttt ggg gtg agc atc	19531
Gly Asp Asp Gly Asp Ala Pro Gly Ser Ser Phe Gly Val Ser Ile	
1810 1815 1820	
gtg tcg gtg gcc ccg ggt gtg ctg cga gac cgc cgg gtg ggt ttg	19576
Val Ser Val Ala Pro Gly Val Leu Arg Asp Arg Arg Val Gly Leu	
1825 1830 1835	
cgc ccg gcg gtc aag gtg gag ctg ttg tcc tcg tcc tcg tcc tcc	19621
Arg Pro Ala Val Lys Val Glu Leu Leu Ser Ser Ser Ser Ser	
1840 1845 1850	
gag gac gag gac gat gtg tgg gga ggg cgc ggg ggg agg agc ccc	19666
Glu Asp Glu Asp Asp Val Trp Gly Gly Arg Gly Gly Arg Ser Pro	
1855 1860 1865	
ccg cag agt cgg ggg tga cggagtcgcc tcctttttctc gtgagcgcca	19714
Pro Gln Ser Arg Gly	
1870	
ctggcgcgcg gactgtttgt tgtaataaaa agcgggaacgg tttttatgaa aaaagtgtct	19774
gtctgtctgt gcgggcgggc gacgggcggg ctggtcggac cccccccga aaataacccc	19834
cccccggttt ctgggcgccc ggcggacccc gggagaggag gccagccctc tcgcggcccc	19894
ctcgagagag aaaaaaaaaa gcgacccac ctccccgcgc gtttgcgggg cgaccatcgg	19954
gggggacttg cattacccta tcccagtatt gtttgtacgc ctctaattga gtaactgtcc	20014
caataacccc gacttcctat atacagtgtt tttgtttgtg gacttacctt tatttacggg	20074
tattacaggg ggggtggagaa atgtcttcgt atcgtctttt atctaaataa agacagaatc	20134
taaaatgtca cttagctgta taccgcggccc aaggttatac caatcaactt ccctgtttgt	20194
tgggactgtc cgcctacccc aatacacatt ttataccac gtttttagtgg gtgggactta	20254
aaagaaatgg gtggagggat ataggggtgt gtcttcgttg gtaccaatta taaaaatgta	20314
ctcgccacaa ctcaaatctt agaacgcatg gcagttctgc tacgtgtttg gatgcccgga	20374
cattagaata cagccagttg ttacc atg gat acc ata tta gcg ggc ggt agc	20426
Met Asp Thr Ile Leu Ala Gly Gly Ser	
1875	
ggc acc tcc gac gct tcg gat aat acc tgc acc ata tgc atg agc	20471
Gly Thr Ser Asp Ala Ser Asp Asn Thr Cys Thr Ile Cys Met Ser	
1880 1885 1890	
acc gtt tcc gat ctc gga aaa acc atg ccg tgt ttg cac gac ttc	20516
Thr Val Ser Asp Leu Gly Lys Thr Met Pro Cys Leu His Asp Phe	
1895 1900 1905	
tgc ttt gtt tgt att ccg gca tgg acc tcc acc agc gtc cag tgt	20561
Cys Phe Val Cys Ile Arg Ala Trp Thr Ser Thr Ser Val Gln Cys	
1910 1915 1920	
cct ctc tgc cgg tgt cca gtg caa tcc atc ctg cat aag atc gta	20606
Pro Leu Cys Arg Cys Pro Val Gln Ser Ile Leu His Lys Ile Val	

1925		1930		1935											
agt Ser 1940	gat Asp 1940	aca Thr 1940	agt Ser 1940	tac Tyr 1940	aag Lys 1945	gaa Glu 1945	tat Tyr 1945	gaa Glu 1945	gtg Val 1945	cac His 1950	cca Pro 1950	tcc Ser 1950	gac Asp 1950	gac Asp 1950	20651
gat Asp 1955	ggt Gly 1955	ttt Phe 1955	tct Ser 1955	gag Glu 1955	ccg Pro 1960	tca Ser 1960	ttt Phe 1960	gaa Glu 1960	gat Asp 1960	tcc Ser 1965	atc Ile 1965	gac Asp 1965	atc Ile 1965	cta Leu 1965	20696
ccg Pro 1970	gga Gly 1970	gat Asp 1970	gtc Val 1970	ata Ile 1970	gat Asp 1975	ctt Leu 1975	ctg Leu 1975	cca Pro 1975	cca Pro 1975	agc Ser 1980	cca Pro 1980	gga Gly 1980	ccg Pro 1980	agt Ser 1980	20741
cgg Arg 1985	gag Glu 1985	tcc Ser 1985	atc Ile 1985	caa Gln 1985	cag Gln 1990	cca Pro 1990	aca Thr 1990	tca Ser 1990	aga Arg 1990	tcg Ser 1995	agt Ser 1995	cgg Arg 1995	gag Glu 1995	ccc Pro 1995	20786
att Ile 2000	caa Gln 2000	tca Ser 2000	cca Pro 2000	aac Asn 2000	cct Pro 2005	ggg Gly 2005	ccc Pro 2005	ctt Leu 2005	caa Gln 2005	tcg Ser 2010	tcg Ser 2010	gct Ala 2010	aga Arg 2010	gag Glu 2010	20831
ccc Pro 2015	aca Thr 2015	gca Ala 2015	gag Glu 2015	tca Ser 2015	cca Pro 2020	agt Ser 2020	gac Asp 2020	tct Ser 2020	caa Gln 2020	cag Gln 2025	gat Asp 2025	tct Ser 2025	ata Ile 2025	caa Gln 2025	20876
cca Pro 2030	ccg Pro 2030	acc Thr 2030	cga Arg 2030	gac Asp 2030	tcg Ser 2035	agc Ser 2035	cct Pro 2035	ggt Gly 2035	gta Val 2035	acc Thr 2040	aaa Lys 2040	aca Thr 2040	tgc Cys 2040	tct Ser 2040	20921
acc Thr 2045	gca Ala 2045	tca Ser 2045	ttt Phe 2045	tta Leu 2045	cgg Arg 2050	aag Lys 2050	gta Val 2050	ttt Phe 2050	ttt Phe 2050	aaa Lys 2055	gac Asp 2055	caa Gln 2055	cct Pro 2055	gct Ala 2055	20966
gtt Val 2060	cga Arg 2060	tcg Ser 2060	gcg Ala 2060	acc Thr 2060	ccg Pro 2065	gtg Val 2065	gtg Val 2065	tat Tyr 2065	ggc Gly 2065	tcg Ser 2070	att Ile 2070	gaa Glu 2070	tct Ser 2070	gca Ala 2070	21011
cag Gln 2075	caa Gln 2075	ccc Pro 2075	cgg Arg 2075	acc Thr 2075	ggg Gly 2080	ggg Gly 2080	cag Gln 2080	gac Asp 2080	tac Tyr 2080	cgt Arg 2085	gat Asp 2085	cgt Arg 2085	cca Pro 2085	gta Val 2085	21056
tct Ser 2090	gtg Val 2090	gga Gly 2090	att Ile 2090	aat Asn 2090	caa Gln 2095	gac Asp 2095	cca Pro 2095	cga Arg 2095	acc Thr 2095	atg Met 2100	gac Asp 2100	aga Arg 2100	ctg Leu 2100	cct Pro 2100	21101
ttt Phe 2105	cga Arg 2105	gcc Ala 2105	acg Thr 2105	gat Asp 2105	aga Arg 2110	gga Gly 2110	aca Thr 2110	gag Glu 2110	gga Gly 2110	aac Asn 2115	gcg Ala 2115	aga Arg 2115	ttc Phe 2115	ccg Pro 2115	21146
tgt Cys 2120	tac Tyr 2120	atg Met 2120	caa Gln 2120	cct Pro 2120	tta Leu 2125	ctc Leu 2125	gga Gly 2125	tgg Trp 2125	ctt Leu 2125	gat Asp 2130	gat Asp 2130	caa Gln 2130	ctt Leu 2130	gcg Ala 2130	21191
gaa Glu 2135	ctg Leu 2135	tat Tyr 2135	caa Gln 2135	ccc Pro 2135	gaa Glu 2140	att Ile 2140	gta Val 2140	gag Glu 2140	cct Pro 2140	aca Thr 2145	aaa Lys 2145	atg Met 2145	ttg Leu 2145	ata Ile 2145	21236
tta Leu 2150	aac Asn 2150	tat Tyr 2150	ata Ile 2150	ggt Gly 2150	att Ile 2150	tac Tyr 2150	ggg Gly 2150	cgt Arg 2150	gat Asp 2150	gag Glu 2150	gcg Ala 2150	gga Gly 2150	tta Leu 2150	aaa Lys 2150	21281

2150		2155		2160	
aca tcc ctg cgt tgt ctt ttg cat gat tca aca gga ccg ttt gta	21326				
Thr Ser Leu Arg Cys Leu Leu His Asp Ser Thr Gly Pro Phe Val					
2165	2170	2175			
aca aac atg tta ttc ttg ttg gat cga tgt acc gat cca acc cgc	21371				
Thr Asn Met Leu Phe Leu Leu Asp Arg Cys Thr Asp Pro Thr Arg					
2180	2185	2190			
cta acc atg caa acc tgg acc tgg aaa gat aca gcc atc caa cta	21416				
Leu Thr Met Gln Thr Trp Thr Trp Lys Asp Thr Ala Ile Gln Leu					
2195	2200	2205			
att aca ggt cca att gta aga cca gaa acc acc tca acc ggg gag	21461				
Ile Thr Gly Pro Ile Val Arg Pro Glu Thr Thr Ser Thr Gly Glu					
2210	2215	2220			
acc tct cgt ggc gat gaa agg gat acc cga ttg gta aat aca ccc	21506				
Thr Ser Arg Gly Asp Glu Arg Asp Thr Arg Leu Val Asn Thr Pro					
2225	2230	2235			
caa aaa gtc agg ctt ttt tct gtg tta ccg ggg att aaa ccg gga	21551				
Gln Lys Val Arg Leu Phe Ser Val Leu Pro Gly Ile Lys Pro Gly					
2240	2245	2250			
agc gca agg ggt gct aag cgc cgt tta ttt cat acc ggc aga gac	21596				
Ser Ala Arg Gly Ala Lys Arg Arg Leu Phe His Thr Gly Arg Asp					
2255	2260	2265			
gtt aaa cga tgc tta aca ata gac ctg aca tct gag tct gat tcg	21641				
Val Lys Arg Cys Leu Thr Ile Asp Leu Thr Ser Glu Ser Asp Ser					
2270	2275	2280			
gca tgt aag gga agt aaa acc cgc aaa gtt gcc tct cca cag ggg	21686				
Ala Cys Lys Gly Ser Lys Thr Arg Lys Val Ala Ser Pro Gln Gly					
2285	2290	2295			
gag tcc aat acc ccc tcc acc tcc gga tca aca tca ggt tca ctg	21731				
Glu Ser Asn Thr Pro Ser Thr Ser Gly Ser Thr Ser Gly Ser Leu					
2300	2305	2310			
aaa cac ctt acc aaa aaa agc tct gcc ggt aaa gcg ggt aaa ggt	21776				
Lys His Leu Thr Lys Lys Ser Ser Ala Gly Lys Ala Gly Lys Gly					
2315	2320	2325			
att cca aac aag atg aag aag tcc tag tttgttgga gggggaagga	21823				
Ile Pro Asn Lys Met Lys Lys Ser					
2330	2335				
aatgccttaa acatccacag tctgctttat taccaactgt atgtaaatta tgatcattaa 21883					
acgtgcattt taaaaatacc tgagtgttgc tattgggtcgt aagggttggt atatctggaa 21943					
cccaagggtgt aaatactgcc ccctggtaag tccgtacacg attcggaatg cccgcaatcc 22003					
gggtctcggag taaccggggc atcctgctct gcaaatacaa taaacataac agtctaacag 22063					
tacgcatgtg ctgtcgtaag cgctccgccc taaattacaa aaatttgaga ttacgctcaa 22123					

tacttgtcac	cgtttgtatt	tatacacctc	tacgggagca	aactaaaggt	atacttggag	22183
atgcaaccaa	ggccgagttg	agacgggaaa	attagaagct	gtttttccag	cggcaaaaat	22243
catccggttt	gggtatgtct	tatagcaatt	aaagttatta	aatggccgg	aaggtggcgg	22303
gggtggtgaa	ggcgagggta	aagcaaactt	gcggggggat	aaaaggcata	tatgttacia	22363
aatacgcacg	caaataataa	ttttagtttt	gtacttacag	taaaggcaac	ggtgttttcg	22423
gtttaggcag	ccggaccctg	ttaaaatgcc	aactggatag	tctgcaagga	ggaaacgctg	22483
ctgcaatgag	tcagggtttt	aggtgaatta	ggtatgatgc	atcatttttg	ttaatggact	22543
tttaatggat	tgaaacggat	agaaggaaac	gtgtagcata	atggatattg	gttgatattt	22603
taagcacgct	gccaagtacg	cactaagaat	gcttagaaat	atttaaactg	aatgcggtg	22663
gtttggcaaa	cgttaccgta	aatcaatctc	agatccaagg	gataatggcc	gttgggcagg	22723
cctccaaaag	gcaatttgag	cgttttaagt	ttggggtagc	tttttaaagc	ttgattggca	22783
aacgttaccg	caaataatc	ttagatccaa	gggataatgg	ccgttgggca	ggcctccaaa	22843
aggcaatttg	agcgttttca	gtccgcttga	aaacgggtcta	agtatttgcc	gtaaatagacc	22903
gcgagaggta	taatataaac	atctgttttc	ccgatgacgt	gttaagaaaa	gtgattatat	22963
cagataacgg	gggactgtaa	agcttaatac	gtgacatgtg	attgggtgta	taaatactac	23023
atccaaatct	tgcatggaaa	ttcgctttgt	cggcacgccg	tgacgtttga	catattaaga	23083
tcgccctttt	taggaaaatg	agatatgaca	ccaagagttt	aactaaaggc	caactgtata	23143
tataaaaactc	atacttgtcc	atgcttccat	tagagtggtc	aagtttttca	aaggatacga	23203
caacgtcgta	gtgaaggga	aacacaagcg	tcatggcatc	acataaatgg	ttactgcaga	23263
tagttttttt	aaaaactatc	acaatcgctg	attgtcttca	tctccaagac	gacactccgt	23323
tgtttttttg	agccaaaccg	ctatcggatg	tgagtttgat	tataacggaa	ccgtgcgtgt	23383
catcggtata	tgaggcggtg	gactatgcgg	cacccccggg	atcaaactc	agcgaggcgc	23443
tatcgggaat	cgtgggtaag	acaaaatgtc	cagtaccgga	agttatactt	tggtttaaag	23503
acaaacaaat	ggcgactagg	acaaatccat	acgtcacctt	aaaggggctg	gcacaatctg	23563
ttggtgaaga	acataaaaagc	ggggacatac	gcgatgcttt	gttggatgcc	ctttccgggtg	23623
tatgggtaga	ctctactcca	tcttccacaa	atatcccgga	aa atg gat	gtg tct	23677
				Met Asp	Val Ser	
					2340	
ggg gag ccg acc	ggt tgt tcc aac	gcg tat gcc aat	gaa atg aaa			23722
Gly Glu Pro Thr	Val Cys Ser Asn	Ala Tyr Ala Asn	Glu Met Lys			
	2345	2350	2355			
cta tcg gat tca	aag gac att tat	ggt ttg gcc cat	ccg gtt acc			23767
Leu Ser Asp Ser	Lys Asp Ile Tyr	Val Leu Ala His	Pro Val Thr			

2360				2365				2370							
aaa	aaa	acc	cgc	aag	cga	ccc	cgc	ggg	ctg	cct	ttg	ggg	ggt	aag	23812
Lys	Lys	Thr	Arg	Lys	Arg	Pro	Arg	Gly	Leu	Pro	Leu	Gly	Val	Lys	
			2375										2385		
cta	gac	ccc	cca	acc	ttc	aag	tta	aat	aac	atg	tca	cat	cat	tac	23857
Leu	Asp	Pro	Pro	Thr	Phe	Lys	Leu	Asn	Asn	Met	Ser	His	His	Tyr	
			2390										2400		
gac	acg	gaa	acg	ttc	acc	ccc	gtc	tct	tcg	caa	ctg	gat	tcg	ggt	23902
Asp	Thr	Glu	Thr	Phe	Thr	Pro	Val	Ser	Ser	Gln	Leu	Asp	Ser	Val	
			2405										2415		
gaa	ggt	ttc	agc	aag	ttt	aac	att	tcc	cct	gag	tgg	tat	gac	ctg	23947
Glu	Val	Phe	Ser	Lys	Phe	Asn	Ile	Ser	Pro	Glu	Trp	Tyr	Asp	Leu	
			2420										2430		
ttg	tcg	gac	gaa	ctt	aaa	gag	ccg	tac	gcg	aaa	ggt	att	ttt	tta	23992
Leu	Ser	Asp	Glu	Leu	Lys	Glu	Pro	Tyr	Ala	Lys	Gly	Ile	Phe	Leu	
			2435										2445		
gaa	tac	aat	cgt	ctt	tta	aat	tca	ggg	gaa	gaa	ata	ctt	cca	tct	24037
Glu	Tyr	Asn	Arg	Leu	Leu	Asn	Ser	Gly	Glu	Glu	Ile	Leu	Pro	Ser	
			2450										2460		
aca	ggc	gat	att	ttt	gca	tgg	acg	cga	ttt	tgc	gga	ccc	cag	agc	24082
Thr	Gly	Asp	Ile	Phe	Ala	Trp	Thr	Arg	Phe	Cys	Gly	Pro	Gln	Ser	
			2465										2475		
att	cgc	ggt	gta	att	att	ggt	caa	gat	cca	tac	cct	acc	gcg	gga	24127
Ile	Arg	Val	Val	Ile	Ile	Gly	Gln	Asp	Pro	Tyr	Pro	Thr	Ala	Gly	
			2480										2490		
cat	gca	cat	ggg	cta	gcg	ttt	agt	gta	aaa	cgt	ggc	ata	aca	cca	24172
His	Ala	His	Gly	Leu	Ala	Phe	Ser	Val	Lys	Arg	Gly	Ile	Thr	Pro	
			2495										2505		
ccg	tct	agt	ctt	aaa	aat	att	ttt	gcg	gcc	ctc	atg	gaa	tca	tac	24217
Pro	Ser	Ser	Leu	Lys	Asn	Ile	Phe	Ala	Ala	Leu	Met	Glu	Ser	Tyr	
			2510										2520		
cca	aat	atg	act	ccg	ccc	act	cac	gga	tgc	ctg	gag	agt	tgg	gca	24262
Pro	Asn	Met	Thr	Pro	Pro	Thr	His	Gly	Cys	Leu	Glu	Ser	Trp	Ala	
			2525										2535		
agg	cag	ggg	gtg	tta	ttg	ctg	aat	acc	acg	ctt	acg	ggt	cgt	cgc	24307
Arg	Gln	Gly	Val	Leu	Leu	Leu	Asn	Thr	Thr	Leu	Thr	Val	Arg	Arg	
			2540										2550		
ggg	act	ccg	ggg	tcg	cat	gta	tac	tta	ggc	tgg	ggg	cgg	ctg	gtg	24352
Gly	Thr	Pro	Gly	Ser	His	Val	Tyr	Leu	Gly	Trp	Gly	Arg	Leu	Val	
			2555										2565		
caa	cgc	gtg	cta	cag	agg	tta	tgc	gag	aac	cgt	aca	ggg	tta	ggt	24397
Gln	Arg	Val	Leu	Gln	Arg	Leu	Cys	Glu	Asn	Arg	Thr	Gly	Leu	Val	
			2570										2580		
ttt	atg	ctg	tgg	ggg	gcg	cat	gca	cag	aag	aca	acc	caa	ccg	aat	24442
Phe	Met	Leu	Trp	Gly	Ala	His	Ala	Gln	Lys	Thr	Thr	Gln	Pro	Asn	

2585	2590	2595	
tca aga tgt cat	ctg gtg cta aca cac	gcg cat ccg tcg cca ttg	24487
Ser Arg Cys His	Leu Val Leu Thr His	Ala His Pro Ser Pro Leu	
2600	2605	2610	
tcc cgt gtt cca	ttt cgg aat tgt cga	cat ttc gtt caa gcc aat	24532
Ser Arg Val Pro	Phe Arg Asn Cys Arg	His Phe Val Gln Ala Asn	
2615	2620	2625	
gag tat ttt acg	cgt aaa ggc gaa ccc	gag atc gat tgg agt gtt	24577
Glu Tyr Phe Thr	Arg Lys Gly Glu Pro	Glu Ile Asp Trp Ser Val	
2630	2635	2640	
ata taa cactccaatc	gaccctcttg cgtaccataa	tgtttttcgga gttgcctcct	24633
Ile			
tccgtaccga cggcattgct	tcaatgggggt tggggattgc	atcgtggacc gtgttcgatc	24693
ccaaatttta aacaggtagc	cagccaacac agtgttcaga	acgattttac agaaaatagc	24753
gttgatgcaa atgaaaaatt	tccgattggg cacgcgggct	gtattgagaa aaccaaagac	24813
gactatgtac catttgatac	gttgttcatg gtatcatcta	ttgacgaact tgggcggaga	24873
caattaaccg acaccatccg	ccgcagcttg gttatgaacg	cctgtgaaat aacggtcgcg	24933
tgtacgaaaa cgcagcctt	ttctggtcga ggcgtgtcac	gacaaaaaca cgtgacccta	24993
tctaaaaata aattcaatcc	atccagtcac aagagcctgc	aaatgtttgt gttgtgtcaa	25053
aaaacccatg caccctgtgt	cagaaaccta ctgtacgaga	gtattcgtgc aagaagacct	25113
cgccgatatt acaccgctc	aacggacgga aaatcgcgctc	cgttggtacc agtgtttgtg	25173
tatgagttta cggctttaga	tcgtgtcctt ttacataagg	aaaatacttt gaccgaccaa	25233
ccaattaata ctgaaaatag	cggtc atg gac gta	cga gaa cgt aat gtg ttt	25285
	Met Asp Val Arg Glu Arg Asn Val Phe		
	2645	2650	
gga aat gcc agc	gtt gcc acg ccg ggg	gaa cat cag aaa ttt gta	25330
Gly Asn Ala Ser	Val Ala Thr Pro Gly	Glu His Gln Lys Phe Val	
2655	2660	2665	
cgc gag tta att	ttg tcg gga cac	aac aac gtc gta tta cag aca	25375
Arg Glu Leu Ile	Leu Ser Gly His	Asn Asn Val Val Leu Gln Thr	
2670	2675	2680	
tac act ggt aaa	tgg tca gac tgc cgt	aaa cac ggt aaa tcg gtt	25420
Tyr Thr Gly Lys	Trp Ser Asp Cys Arg	Lys His Gly Lys Ser Val	
2685	2690	2695	
atg tat aat acc	ggt gaa gcg cgg cac	cca acc tgc aag gct cat	25465
Met Tyr Asn Thr	Gly Glu Ala Arg His	Pro Thr Cys Lys Ala His	
2700	2705	2710	
caa cgt taa gaggataggt	gtcttcaaata taaaagccgt	taaatataaa	25514
Gln Arg			

ttttttgtgt	cgtttattcg	cgtatgaaat	gtaatcagtt	gggataaatg	ttagtcttga	25574
atctgtcttt	acgcgtttgc	ggcgtcccgt	aatattaacg	aaagaacgtc	gtcgtctgat	25634
gtgaaaaagg	ccggttgtgg	tgaagaagga	cagttggttt	caggctgccg	cctttgcgat	25694
gtatactggg	gcgggggttg	tggtgggtgtg	gtctgatcgt	caggctctgtt	tacccgtaaa	25754
ccgtatataa	caattgagat	acacatggat	aggatcatctt	ccgttattac	ggatagtacc	25814
ccccccacat	tactgtacag	ctgagatggt	gggtcagaac	cgaccagga	cataaacggc	25874
atcgcaaagt	ttgcgtgggg	tttgtcctgt	aagtggaaat	cccggcgct	aatgcgtat	25934
gatgaaaagt	cagtagaaca	gtctatgggt	agcagggtca	ctgtatgggt	gtgttgaagg	25994
acgatcatac	caccgctcat	tgtatcacat	cgagcgtccg	tcttcaccgc	cattgatctt	26054
gaccaccccg	taaatgcgta	gagtgtttgt	tcatgatccg	gtaaagtcca	gtgaagaacc	26114
cgcctaacc	catgtaacct	atataaaata	aacgtcggtg	ggggccaga	gatgctcatg	26174
gcgggtgtat	ttaagacaaa	acctagaaat	gagaacagca	agcccgcatg	cgtgttttta	26234
tacaatgctt	taatacacia	cgtgtacgtt	gggatcacgt	agagcggcaa	gaatgtgatc	26294
gctaatttct	gcggattttt	catatcgttc	ccgtagaggg	tttagattca	tttttaagaa	26354
cctagaggag	accgtacgcg	acatggcaac	atacacacta	tttaggcgca	gtttatccgc	26414
cgtaaaacag	atagctacct	tctctaaact	cagaccctgt	gagcgtgcaa	ttgtcatggc	26474
tagtttagaa	ctaaggccat	agtccaccgt	ggtggccatt	gccaatctctg	catcctctat	26534
agactcggta	aattcacata	cgttagcggt	tacgatggac	acaaacccat	gttgatcctg	26594
taagaccata	agaggtagct	gtagagcata	taacatttcg	gtagtctcgc	ggtacagctt	26654
ttttcgggtc	agttcctcta	caaagactgg	cacgggtgca	aaagtatacc	ccaaaagggt	26714
atacgtatct	gtttgtaatg	ccaaagataa	cagccccccc	cgcacattgc	cgatcaaaag	26774
ctcgcttccg	ttgaaattaa	cattatcgac	atacgcgcta	aagggggcgg	ttgtaaagct	26834
gctttcgaaa	agctctgcta	atatggcata	tcgaccatcg	taaatagctt	tcattaacag	26894
aaactgagca	tggacctcat	tggatgattt	gggataggaa	aattcgtact	ggcagtatac	26954
caagtcaata	acctcgctcg	taagtgccgt	aaaaattaca	tcatccgggt	cttcgggtat	27014
ggaggccggt	actttggact	cgggggcttt	ggtaaagcag	aaggctttat	cggcagaagt	27074
agctgcacca	tcacagtcaa	tcccggcacc	cgccccatta	accgctgctt	cgtgtaaggg	27134
ggctttgttt	gttccagaca	ataactccag	ggttaaggca	gctaaccggt	tgtatgctaa	27194
cgatacctta	tcgggatgta	ggtttttatt	taacaaaaaa	ttgtaaaagt	taatcaagcc	27254

tccaaagatt	aggtttgaca	gaaaccggta	agcatattcg	atggatgtct	ctcctcgagc	27314
cttcacaaag	gagtcgtcac	gtaaaacctt	tgcaaacgat	tgaaatgtac	cactgaatcc	27374
aataactaac	ttacgtagtc	ttgtggttac	aactacgaga	ctatttagca	cgtaagtgat	27434
gtctgtacgg	gctacaatta	agtcgcgatt	tgaatgtggt	tcgtatttaa	ctgttcccat	27494
gtcatgatct	cggctttggg	aataattgtg	caaacgaccg	gagtttgccc	gtatccaatg	27554
ttcaacagaa	agtcggggtt	gtcccgttaa	tttgcggtat	tcatcaaatg	ccgttagccg	27614
gatgaatgta	taagtcggta	aggcaaacac	agaaaaatgg	tcatttttcg	atagttttta	27674
atgcgcgtgt	aacttactca	tatacgcgct	cacctcctta	tgcgacgaat	acagacgcgt	27734
ccatccggga	agattagcag	gattgttaat	ataggatgca	ggtacaacaa	atgtatcgac	27794
cagacgcgca	tgtgcttcgg	taataggtag	cccgtactca	agcgttttta	aaagatttcc	27854
aaaatcgtcc	tcttgacatc	gtttgttatt	aataaagatt	gcccagttat	gtgagatggt	27914
agtatatatga	cgcagagttt	gattgcagat	tatatacggt	agtatatattt	cactaggagt	27974
tacgtgtgaa	cgctgcatgt	catgttgaaa	atgagattct	aacgagtcag	tttgggtggg	28034
cgaaccgacg	catactatga	ccggttttcg	accgtttatg	tactgagggc	tttgatatat	28094
agcattcaaa	agccaccaac	agtaaacaac	ggccgtgaga	atatgacgcc	ctagcaatcc	28154
tgcttcatca	ataacaataa	cgttgctccg	ggtaaaagcc	ggaagggaac	cgcatgcat	28214
aaacgcgggt	ccggacattg	agcctgtagg	tttattaagc	aaacgttcaa	ttgcccacag	28274
ggttttaaat	gtcgatgttc	ctccgcgacc	gtcgtccccc	atttgaaaca	ctcgttttgt	28334
tatatcaatt	aaaacttccc	agtagtatac	aatatctctt	ttttgcaggt	cctcaataga	28394
aggggggggtc	gtagtccagt	tatatgcgta	acggcccagc	tgagcctgaa	tgtgatttcc	28454
gcgaaaacca	aattcatgaa	agattgtggt	tatcggacga	ctcgcataag	ccgttgataa	28514
cttagcatga	acattttggg	cagcaaccct	ggtggatccg	gtaataatgc	aatcgatagc	28574
ttcgtttaagc	gtttggatac	acgtgctttt	tccggagccg	gcatttccgc	taattaaata	28634
aacggagaag	gggagctcat	tcctctgcat	ttcaggaggc	gcttgcagtt	cgagtaactg	28694
tttaaaccac	cacaaccgcg	gaacacgttc	ttttggaatc	gtaattgcgg	caagttctcg	28754
aatccgtgag	aggatagggt	gaatgctatg	catagagggt	aagttttaat	atacactgtc	28814
atcaaatacca	ttgggcgtct	ctggattaaa	aacgtttttg	ggtgaagaac	tgtctacaga	28874
aattgatctt	ttcatcgtgg	ttttcaatgg	ccgaaataac	gtctcttttt	aataacagtt	28934
ccggtagtga	agaaaaaagg	atagcaagtt	ctgtttctat	tgaccagggc	ttgaatggaa	28994
gtaacccaaa	tgaccaatac	aagaacatgt	tcgatatata	ctggaatgag	tacgccccgg	29054

atataggggtt	ttgtacattt	ccggaggaag	atggctggat	gttaatacac	ccaaccacgc	29114
aaagtatggt	gtttcgaaaa	atcctagccg	gtgacttttg	atataccgat	ggacaaggca	29174
tatatagcgc	tgtacgggtc	acggaaactg	taattcgcca	agttcaggca	accgttttga	29234
tgaacgcgtt	ggatgcaact	cggtatgagg	acctagcagc	agattgggaa	caccacatcc	29294
aacaatgtaa	cctgcatgcc	ggggctctag	cggaacgtta	tgggctatgt	ggagaatcag	29354
aagccgtacg	gcttgccat	caggtttttg	aaacctggcg	tcaaacatta	cagtcacgt	29414
tacttgagtt	tctgcgtgga	ataaccgggt	gtctctatac	cagtggttta	aatggaaggg	29474
tcggttttgc	caaatacgtg	gactggatag	cctgtgtagg	tattgtgccc	gttgtaagaa	29534
aggtacgatc	agaacagaat	ggaaccctg	caccattaaa	tacgtatatg	ggtcaagcgg	29594
cagaactgtc	ccagatgtta	aaagttgccg	atgcaacgtt	ggccagagga	gcggcgggtg	29654
tcacaagcct	agttgagtgt	atgcaaaatg	ttgctattat	ggattatgat	aggacgcgtc	29714
tttattataa	ttataaccga	agattaatta	tggcaaagga	tgatgtaacg	ggcatgaagg	29774
gagagtgttt	ggtcgtgtgg	ccgcccgttg	tatgtgggga	gggtgtagta	tttgactcac	29834
ccttacagcg	gctttctggg	gaggtgttgg	cctgttatgc	attacgtgaa	catgctcgcg	29894
tctgccaagt	tttaaataca	gcccctttgc	gcgtgttaat	aggtcgccgg	aatgaagatg	29954
atagatctca	cagcacacgt	gcggttgatc	gtataatggg	cgagaacgat	acaacacggg	30014
ctggatcggc	cgcgtctaga	cttgtaaagc	taatagttaa	cttaaaaaac	atgagacatg	30074
ttggagatat	taccgaaacc	gtacgttcct	atctagaaga	aacgggcaat	cacattctgg	30134
aaggaagtgg	atcgggtggac	acatcacaac	cgggggttgg	caaggccaac	caatccttta	30194
acgggggggc	aatgtccgga	acaacaaacg	ttcaaagtgc	gtttaaaact	tcggtggtta	30254
acagtatcaa	cggcatgctc	gagggttatg	tgaataattt	attcaaaacc	attgagggtc	30314
tcaaggatgt	gaacagcgat	ctgaccgaaa	ggctccagtt	caaagaagga	gagctgaaac	30374
ggttacggga	agagagggtg	aaaataaagc	catctaaagg	gtcacatatt	acaatggcag	30434
aagaaacacg	tattgccgat	ttaaatcacg	aggttataga	tcttacgggc	ataatagggg	30494
atgatgcata	tattgccaat	agttttcaat	ctcgttatat	cccccttat	ggagatgata	30554
taaaacgttt	gtctgagcta	tggaaacagg	aacttgttcg	ctgttttaag	cttcaccggg	30614
taaacaataa	tcaaggccag	gaaatttctg	tatcatattc	aatgcgtca	atctcattac	30674
tagttgcgcc	gtatttttca	ttcatattac	gggccacccg	attaggattc	ttggtaactc	30734
aaagcgaggt	acatagggtc	gaggaagagt	tatgccaggc	tatttttaaa	aaggcgagaa	30794
cagagtcccta	tttatcccaa	atccgaatat	tatatgaaat	gcaggttcgc	gcagaggtaa	30854

taaaacggggg	cccacggaga	acaccaagtc	cttcctggggg	tttgccctgac	cctacagaag	30914
atgacgaaag	aatccccggaa	cccaataaaa	taaataacca	atacatgcat	gttggatata	30974
aaaacctatc	ccatttttatg	aaaggacacc	cccctgagag	gttacgggta	cacaaggtaa	31034
atg cag cgg att cga cct tac tgg ata aaa ttc gag caa acc gga	31079					
Met Gln Arg Ile Arg Pro Tyr Trp Ile Lys Phe Glu Gln Thr Gly						
2715 2720 2725						
ggc gcg ggg atg gcc gat ggg atg tcc gga ata aat ata ccc agc	31124					
Gly Ala Gly Met Ala Asp Gly Met Ser Gly Ile Asn Ile Pro Ser						
2730 2735 2740						
att tta ggt tgc agc gta acg atc gac aac tta cta aca cga gcc	31169					
Ile Leu Gly Cys Ser Val Thr Ile Asp Asn Leu Leu Thr Arg Ala						
2745 2750 2755						
gaa gag ggg ttg gat gtg agc gac gtg atc gaa gat ctt aga ata	31214					
Glu Glu Gly Leu Asp Val Ser Asp Val Ile Glu Asp Leu Arg Ile						
2760 2765 2770						
caa gca ata cca aga ttc gta tgc gag gcg cgg gag gta acc ggt	31259					
Gln Ala Ile Pro Arg Phe Val Cys Glu Ala Arg Glu Val Thr Gly						
2775 2780 2785						
ttg aag cca cgc ttt ttg gca aac tct gtt gta tca ctg cgc gta	31304					
Leu Lys Pro Arg Phe Leu Ala Asn Ser Val Val Ser Leu Arg Val						
2790 2795 2800						
aaa ccg gaa cac caa gag acc gtt tta gta gtg ttg aat ggt gat	31349					
Lys Pro Glu His Gln Glu Thr Val Leu Val Val Leu Asn Gly Asp						
2805 2810 2815						
tca agt gag gtg tcc tgt gat cgt tac tac atg gag tgt gtt act	31394					
Ser Ser Glu Val Ser Cys Asp Arg Tyr Tyr Met Glu Cys Val Thr						
2820 2825 2830						
caa cca gcg ttc cgc gga ttt att ttt tcc gta tta act gcg gtt	31439					
Gln Pro Ala Phe Arg Gly Phe Ile Phe Ser Val Leu Thr Ala Val						
2835 2840 2845						
gaa gat agg gtg tat acg gtg ggg gtg cct ccg cgc ctg tta atc	31484					
Glu Asp Arg Val Tyr Thr Val Gly Val Pro Pro Arg Leu Leu Ile						
2850 2855 2860						
tat cgg atg act cta ttc cgc ccg gat aat gtc cta gat ttt acc	31529					
Tyr Arg Met Thr Leu Phe Arg Pro Asp Asn Val Leu Asp Phe Thr						
2865 2870 2875						
tta tgt gtt att tta atg tat ctg gaa ggc att ggg ccc tcc ggg	31574					
Leu Cys Val Ile Leu Met Tyr Leu Glu Gly Ile Gly Pro Ser Gly						
2880 2885 2890						
gca tct cca tcg ctg ttt gta caa ttg tct gta tat ctt aga cgc	31619					
Ala Ser Pro Ser Leu Phe Val Gln Leu Ser Val Tyr Leu Arg Arg						
2895 2900 2905						
gtt gag tgt caa ata gga cct ttg gaa aaa atg cgt cgg ttt tta	31664					
Val Glu Cys Gln Ile Gly Pro Leu Glu Lys Met Arg Arg Phe Leu						

2910	2915	2920	
tat gag gga gtt tta tgg ttg tta aac act cta atg tat gtc gtt Tyr Glu Gly Val Leu Trp Leu Leu Asn Thr Leu Met Tyr Val Val 2925 2930 2935			31709
gat aac aac ccc ttt aca aaa acc cgc gta ttg ccg cat tat atg Asp Asn Asn Pro Phe Thr Lys Thr Arg Val Leu Pro His Tyr Met 2940 2945 2950			31754
ttt gtt aag tta ctg aac cct cag cct gga acg gcc ccc aat att Phe Val Lys Leu Leu Asn Pro Gln Pro Gly Thr Ala Pro Asn Ile 2955 2960 2965			31799
ata aag gct ata tat tca tgt ggg gtg ggt cag cgt ttt gac ctg Ile Lys Ala Ile Tyr Ser Cys Gly Val Gly Gln Arg Phe Asp Leu 2970 2975 2980			31844
ccc cac gga acc ccc ccc tgt cca gat ggt gtg gtg caa gta ccc Pro His Gly Thr Pro Pro Cys Pro Asp Gly Val Val Gln Val Pro 2985 2990 2995			31889
ccg gga ttg tta aat gga cct tta cga gat tcg gaa tat cag aag Pro Gly Leu Leu Asn Gly Pro Leu Arg Asp Ser Glu Tyr Gln Lys 3000 3005 3010			31934
agc gta tat ttt tgg tgg tta aat cgc acc atg gta aca ccg aaa Ser Val Tyr Phe Trp Trp Leu Asn Arg Thr Met Val Thr Pro Lys 3015 3020 3025			31979
aat gtt cag tta ttt gaa acg tat aaa aat tca cca cgg gtt gta Asn Val Gln Leu Phe Glu Thr Tyr Lys Asn Ser Pro Arg Val Val 3030 3035 3040			32024
aag taa ataaaccttt tattttaagg atgggttggt gcggcgtggt tttttgtcat Lys			32080
aaaaacaaga agttatatga agcaagggga tcgtcagtaa atttcaatga tggacttgaa			32140
aaatcattat gagcatctag aagatgggta ataatagtga caaacgtgtg tataaggggc			32200
ttgagatgag cagcgcagtc tatgggggga atacaggcac acgatggtag caattcccag			32260
taaacaacag taggaggtcc atgtggggtg ggattacgaa ccataattat ctgtcttggt			32320
ttataatcct tatcttgcac gtgtccgtat gtcagataag atgccggtat tgcttttggt			32380
tccgaatfff gtcctgaag actccagtat accggagtat aacggcgatc aaaaacatgt			32440
tcaaaaaaat cgacgtatgt ttttctggca gcctccacaa cttgtccggc ccatatgtcg			32500
tataggacat ggtcccatat gcaatfffcc tgtatccggt ctcgaatfff tgttgcggtg			32560
cataggagtc ctgaaagacg ctcttttaaa tctcgcgccg cctgacttcg ccatggcacg			32620
ccaactaaat ccggaggcgt gtttggttgt aaattccaca gccagcttcc cgtgggtacac			32680
caggtaaagt cgtgagtgtg cacaccctcg acccgagta ccggttccat ggcgggtgtg			32740

aagttaagac	ctagttgaat	tcgtaataag	cccgtgactg	ctcttttcgca	ggtggccgct	32800
aaattttaagg	ccgaacaacg	tgcctgatct	gaacatacat	tgcgcgtatg	taaatcggtg	32860
aagattcccc	aaaatccatc	ttttatataa	gtacatatag	caaagccctg	ttccaaggcc	32920
gtttgttcga	cgcaaaggct	aatttcattg	gctataaaaa	taatagcttt	gtatatactc	32980
gggagtatgt	gccgtaaccc	cccaaaaaaa	gacaccaacg	cgggttttag	gcaccccatc	33040
cctcgacgca	ttctagccag	gacgattttg	cctaatactaa	aatgcatggg	gaacatagcg	33100
cagtatatcg	tgggaaaaaa	ggcgcgtgaa	tcaaactttg	ccatccaacg	atcttgtagt	33160
tgtacaggct	gtttgaagac	ggtagatatc	cggccccgct	ccaattgac	agttgcatct	33220
gcatgtccag	tatcttgagg	gatttgccca	ataagatcct	gcacccgcgg	aggtaagggg	33280
ggatgctgtc	cccagggggc	tagataatga	aaggcctgaa	taccggttac	tggccacaac	33340
ccatccgttt	ccatgtacat	ctccgtagcc	gtgcgaatag	attcgacggc	tggagtttgt	33400
gtccgaagag	tgggccatcc	gggaaatccg	acagtacaaa	agtagtctct	gtcttcaccc	33460
ttcggattga	gttccggggc	taaatacgca	aagattggac	ggacaacccc	gggttttcca	33520
aacgccgccc	cgtaccacag	tctatatgtt	gctaataattg	aaagggaga	tgtaacgggtg	33580
gaatccgttg	ttaaacagtc	aaaataacac	ggtaagagta	cccttaccac	aattgcgcga	33640
ttgccactaa	gaaccaagcg	gcgttcttca	aggttaaaca	aatcggaggt	ttggccttcc	33700
cgctctatag	ggggggaaaa	cgtagactta	tatttccgac	gtatgtaggc	ctttggtgta	33760
attacctcca	cgtctaaagg	tgtttgttgc	tgggtgtcac	cgtagatttt	aagtgcggtc	33820
aggcgggctg	aggctagcga	cgtaccttgc	gtgtgggctg	tacatgcgct	gactgctgaa	33880
acatcaatgg	ccacgggaaa	attagccctc	aatactccgg	tagatggcgt	gttgctatta	33940
ttcaacgcgt	gttcatcggg	gattgttttt	aacagaagac	ctgtattcgt	atcagtctcg	34000
aatgttactg	gcgaataaaa	cgatttaaac	cctaatacgc	gccgtaaagt	ggccagggca	34060
gtgccatgga	gacaacgcca	ggtgtctgcg	ttacccagtg	gttcaagggg	ccaggcgtct	34120
aacgcagccg	aggacgccgc	cctgcagata	gacgcaaacg	ttgccgcaga	aacactcccc	34180
ccatgcctgg	agtagcgaca	taaatcctct	tgttgtacgg	taatttcggc	aaacttaggg	34240
acgtatttcc	cacatgagtt	tttgcataat	aagtagtata	acacggaaag	accgttctgt	34300
gttaattgtc	cggactgtgt	ccaggatgtg	tatatgcttg	cggcacaagt	gtgtccgctt	34360
tctctaacca	aggtaatctg	cgttgcgctc	atagcttggt	tgtggttcag	tgcattgtta	34420
gaggcccttt	gtgttgtaga	gaggcttagt	atztatgtaa	ccccccctat	ggatgtccat	34480
atatgggtatt	aacgggttat	aaactttcaa	aatttaccgc	cccgtttatc	cgcggccacg	34540

atccccgggga	cagttccgat	agcgctaatt	gtagcatggc	ttcggcatgc	ggggccaagt	34600
gcatttgatg	tgcttgaaaa	tacacgtggc	gtgcccgaagc	gggggcagta	attttgtaac	34660
gctgttgaga	gaacgaatgg	cgctgggtca	taagcagggt	atacaactgg	cggtaggtac	34720
gacatgcaga	acgatccacg	ttaattgaat	caagtaaagt	ttctagatct	ttttttttta	34780
ggttttttcac	acgagtactt	cccggaaagg	tctgggtact	tttagttacg	cgggcgccaa	34840
ataattgttc	ccaaattaaa	cgaaatagag	caatgttata	ttcgtgtttt	gtagggattg	34900
gacggaagca	ttgattatgg	catccatcta	agaatccggt	tgttcgccaa	accgggcggt	34960
ttaatataat	cttagcgtca	gtaacgttac	agcgcataac	ctcaaataatt	agttgagcca	35020
gcgaatcccc	gtgttgattg	aaaagtgtat	taatgtccgt	atccaaaact	tgtgttacac	35080
agccttcggt	ggacggattc	cacttgagtg	tttttgcaat	ataggcacia	cggcgaaaca	35140
gctcccaatg	tgtgggttaa	tttggggcgg	tagttatagt	cgcgatgcta	aattccccgg	35200
ttttgtccag	gacgggaaac	caaccggaag	cgtagtgcgt	gtatatTTTT	tgaaatacgt	35260
caaagtcttc	caacgcttca	ggatattcgt	tacacgcccc	caatattgcc	gtattgacta	35320
gtctaggctg	ttctattgga	catgcaaggg	ctttaataac	tttaatttgt	tcttcggtat	35380
taattgactc	cataagatac	ttttccataa	acgcggtaat	gttatcggcc	ataaatccgg	35440
aagggccaaa	atcgggtcaag	cagctgtcat	tgtcctgtct	aagagaacgc	atacaggaag	35500
ctacggcggt	agcgctatgt	ctgagatcgt	gtataaatgc	acaaaattga	actggggaaa	35560
cgtccgttat	tggacccatg	ccatccaata	caaccaaatt	ttgggttagag	gccaaaagag	35620
tttgtaagat	attaatgcta	tcggctaaac	tccaaagaga	gcattctctg	aaaagggtgt	35680
tgtattttaa	tcttgagaag	agatgggtgt	tcgagcgtgt	aatgcattt	gcacatcggt	35740
gcctaaatgc	acagcacagt	ttgttagtta	tttgggtgtg	tgtaggaaac	cattgaaatt	35800
tatttgatg	ggtaaagttt	agtaacattg	gcgagaacag	gggtccgcat	ctggtccttg	35860
agccatcgac	gtacatcaaa	acttcattaa	gtagcaataa	acgtacacgc	cctaatgact	35920
ggtagaccga	taccatatcc	ggcccatatg	acattggctt	tatgtaagca	aacatgctat	35980
gaaaatgagc	catgtcaaaa	ctcaatccaa	cggtcacgac	ggtagtgtac	accaacacgc	36040
gaaaatgttt	ccattcgttt	acattacata	ggggccgagt	tgagttttaa	ataagaatag	36100
agtctgtaaa	tattgcacaa	aactgagcaa	ctagctccga	aaacgataaa	gttgatgaaa	36160
atatacagat	gttatgccca	cattgtaatc	gtagtgctag	ttcgtcaaaa	aatgttccac	36220
gtagttgggt	tatggtagct	acatcctcgt	gttcaggaga	tcgtttaatg	actcgcacaa	36280
gcgtgtcgat	gcccatatca	cgcaggatcg	tgcaagttct	tccggagaa	ccaactcccg	36340

cgtatgtaca	cacaattgtg	tgtatgtttt	catctccacg	caatccggag	attaaatcaa	36400
taaactgcga	gtttactgta	gcatccatcg	cgataatttg	agaacagcga	tttaaaagac	36460
gatataatag	gctatcaacc	gcggaaagac	gtctcattgt	gggggagtat	aattgtccaa	36520
tcactgacat	tacctcatcc	agtattaata	cgtcgtagct	gtcgatagct	tcgctggata	36580
cgcggtgtag	gctttcaagt	tgcacaatca	aacgttttaa	acccataata	tatgtctcgg	36640
atgtcaaata	tgttacgaat	ccggagaggc	ctgcatcggt	aaaccggtga	atcaacgtct	36700
gggtaaagct	acggcgacat	gagacaacca	gtacgctaata	atctgccttt	aacgcgtggt	36760
gaagccactc	aagcaaggct	gttgtttttac	cagagcccat	aggggcacgt	acgacggtta	36820
ccgggcgagt	ttgtgacata	ccaggtttta	ttagtttttac	tggaacatcc	aattgcagtt	36880
ccaggctaata	tcccgggtgg	gtgtgtttta	tccacgaaac	cagatcccct	ccatataacg	36940
cccgcgcgag	ctgtgtactg	gacgcataga	cggcggcggt	gctctccccg	gtggtgggag	37000
acatgggaac	tcaaaagaag	gggccgcggt	ctgaaaaagt	ctcgccgtac	gacaccacga	37060
cacccgaggt	ggaagcggtta	gatcatcaaa	tggatacgct	taattggcga	atttggataa	37120
ttcaggtgat	gatgttcact	ttgggtgcgg	taatgctcct	ggctacgtta	attgccgcct	37180
cttctgaata	taccgggatc	ccttgttttt	atgctgccgt	agttgattat	gagttattta	37240
acgccaccct	agatgggggg	gtatgggtccg	gaaatagagg	tggatacagc	gccccggttt	37300
tgttttttgga	accacatagc	gttggtggcat	ttacttacta	cacggcttta	acggcaatgg	37360
ccatggcggt	atatacactg	atcacggccg	cgattataca	ccgagaaacg	aaaaatcaac	37420
gtgtccggca	aagctccggt	gttgcatggt	tagttgtaga	tcccacaaca	cttttttggg	37480
gtctttttgtc	attgtgggtta	ttaaacgccg	ttgtgttatt	attagcttac	aagcaaatac	37540
gcgtggctgc	tacattatat	cttggacatt	ttgcgacaag	tgtaatatatt	acaacgtatt	37600
tttgtggacg	cggaaaattg	gacgaaacga	acataaaagc	ggtcgcaaata	ttacgacagc	37660
agagcgtctt	tttatatcgc	cttgccggggc	ctacgcgcgc	agtgttcgtg	aatttgatgg	37720
ctgcgttgat	ggcgatatgt	atcctatattg	tatcattaat	gctggaactt	gtggtggcga	37780
atcatctaca	tacgggactg	tggtcatcgg	tgtccgtggc	catgtctaca	tttagtacat	37840
tgtcagttgt	atatcttata	gtatcagaat	taattttggc	gcattatata	cacgtgttaa	37900
taggaccgtc	cctgggaacg	ctcgtggcct	gtgctacgtt	gggaaccgcc	gcgcactcgt	37960
atatggaccg	attatatgac	cctatatcgg	ttcaatctcc	acggttaatt	cccacaactc	38020
ggggaacctt	ggcttgccctg	gccgtgtttt	ccgttgatcat	gttgcttctc	agattgatgc	38080
gtgcatatgt	gtatcatcga	cagaaacgca	gtcggttcta	cgggtgccgta	agaagagtac	38140

ccgagcgggt	acgggggatac	atacgaaaag	taaaacctgc	acatagaaat	tctcgccgca	38200
caaattaccc	atcacaaggc	tacggctacg	tctatgaaaa	tgactcaaca	tatgaaacgg	38260
accgcgagga	tgagctgtta	tacgagcgat	caaacagtgg	gtgggagtag	cgtgggttgt	38320
acttgtaaac	ccccaagcaa	taaaacaaac	attcacagta	accaaccatg	atttgatgtt	38380
tttattagaa	cgtttatcag	ggtttatcag	ggtttaacat	tttgcgcatc	tggaatggga	38440
gctctttccc	gaagggtttc	gttttggtgt	tacatcgatc	actcgtgggc	ggcgttgtgt	38500
ggatttatcg	gcgtcctctg	ttacattctc	atcaaagtca	aagtcttcaa	agaactctga	38560
gttcaaagca	acggtttctc	cgttgcacgt	aacaagctcg	ttgtaccgtt	tgcacaatcc	38620
acagattcct	cctcgaccgc	tggatgaaga	ttgtcccatc	gcaatgaccg	caatgctgat	38680
gtaatcgcg	tgtttctctg	gtctttaagt	atttgtgtca	ctctaggcac	atcaacttctg	38740
ataggcggtta	gaacggctat	aaccggaacc	gcacagtggg	gtgggatagt	cggccagtta	38800
tattcgtaaa	tggcagccgc	ttgtgtatcg	acgcgcaatg	ggactccac	ctcgtgtggt	38860
cggcgcacac	gtcctataaa	ggtgacaagg	aagggccgta	gttttagcgc	tggaaagtaa	38920
ccggataata	cataggtttg	tacggcaatt	tgtttaaagt	tagcgtgccg	cggattggca	38980
aatacaggaa	tttgaagagc	cgtatctcca	gtggcccatg	caatgggtgt	aattgtcccc	39040
ttttgtatgt	ccggatcatt	aaatacccac	actcgggatg	agattgtccg	attgaggccc	39100
aaatgatggg	cgtcgagttc	tgtaagggcc	ctccacctt	taaatcctaa	acgtttccat	39160
tcaacgtgat	ccgttattaa	ggcctcgcg	gtacttgggt	ttgctgaggg	tccaaagaag	39220
cttacacatg	ggttttttat	agtatataaa	aagtcccgt	gatttgccat	tgtagggtcta	39280
tttattaacg	tggtgtacgt	ccgaccgagc	gggttatatt	tgtcatctgg	atcaaagagg	39340
tatttagcac	gacatttaat	ttcaaaaaat	gaaatgtcgg	tttctgcagg	gtggggattt	39400
agggtgccag	ttaaagggtc	cctgtcacat	acaagaacgt	ccaacgacgc	gcctataagt	39460
cccgttcgaa	cgtcgattaa	aagtccacat	tcatacgttc	cgattcttgg	tgtacccaca	39520
aggagacttg	gagatttggt	attgagcatg	tcaaaattaa	aaaacttagt	tgtagcttct	39580
ggcgttaa	gatcaggagt	acggatatca	gccggatcta	taaacaatgc	ttcaactatc	39640
gctcgtgccg	ccggttcggt	ggtttttcca	aacgccattg	ccgccgcac	accgtatgtg	39700
tctgtagtgt	tatgggtggt	aaaccactga	ggtggaatga	cgggtccaga	tacactccat	39760
ttaagagttg	atgcggtgat	taaatttcgt	ctgagtagtg	tccaaatggc	attgtcgccc	39820
tgaccacgag	tctccgattc	tattgttaat	agaatacgtt	taatgtcgtc	ttgggttaat	39880
ttggatgcta	actcttccgg	acgcggctcc	tgaggctgtg	tggacgtctt	aaagaacagt	39940

gcgttggttag	aaccgggtgt	tgtgtaggtt	acatcatttg	gagactccag	agttgttaga	40000
atattataca	tgtgggataa	acgaataaaa	atacccgctg	tcattcccgcg	acagtccatg	40060
ttcggtgatg	tcttctgtag	cgtgtctata	aatgggtgtt	caacgttaat	cgtgttaata	40120
tccgttttta	caaaaggggtg	ctgtagacct	cccacacggg	caattttttt	ggctggctgg	40180
gggcttatgt	cgatcctatc	caatcccgat	cgtgccataa	taaaggggtga	tccgagcgta	40240
tttctgaatt	atcgtgacac	aacaacgatg	taacaacagt	ggctgggtat	aatgaggccg	40300
gaatgcgtat	gccttcgaaa	agctttgagt	gcgttacgcc	gtaacgcact	gcgtgacact	40360
ggaatatccg	gcgtaaagaa	ttccgggaaa	tacgggtgtt	cagctctccg	gcgtgtataa	40420
agggattata	atttaagtcc	ccgggggatgt	cagatgggag	tatatatggc	gccaggacac	40480
atcgatatgc	cagcgatatca	agcgccaaat	ctgggtgataa	cttatgaccg	tagtagtgat	40540
aatgcgggggt	ccgatgtact	gaaatgggca	gttgtccggg	aagacgtcct	agcaggataa	40600
cttctaagag	tgcttggccc	aatgcataaa	gatcaatcgc	aagtccaact	ctttggggca	40660
aggttccagt	atatttagta	aggcccgttc	cattaatata	atcaagcaag	atttcagggg	40720
gttggtttgt	tccatgactc	aacaccaaac	gaaatgacat	ctgcgatgca	tcccggggta	40780
cgcgtagtac	gtgctccggg	tgggatggat	ttccaacttc	aaatatcgct	cgagtacaaa	40840
gggaatacgt	atttaatgtt	actaggctat	agtctccgat	tactgctgtg	gttatttcca	40900
acgaggcaaa	gttgctcgacg	ttaagaaaaa	tattgccaca	tttcacatct	aggtgggtca	40960
ggccgcacgt	tcgatttaaa	aacgtcaacg	cttgagccaa	atctaaaaat	acatgggcaa	41020
tttttctgtc	tatgtgatca	ggtattgtca	accgtctgga	caggcgaaca	atgtattcat	41080
ccatatccat	gtcgtatgcc	ggaaacagta	gctgtttggg	ttgtaacgaa	aaacctaaaa	41140
ggcaaactat	gctagaaata	cctagccttt	cccctgctcg	tatagaacct	tcactcgcta	41200
aaatcgcgtt	aattaactct	ctattaaaaa	cacgactgtc	catggttttt	acagctattt	41260
ttgacgatgg	gtatatatga	acacgcccac	acgttccccg	tcccgcacaa	ctgggtctat	41320
ctcgaatctg	taatttagaa	aaacataact	gttcattgag	cgtgaagatg	ggtacaatta	41380
aacgggataa	tttggaattt	ctaaaaacct	atgggggttt	gttaaattgt	ggaaaaacgt	41440
ccaccctttc	gcgttgatgt	attggatctc	tcgttaagcc	gtgctttaat	aaaaataagc	41500
ttgtctgttg	tgatcgttct	ggtgattcca	tgcatgttgc	agttgacgga	ttggcccatg	41560
gatgatttac	acatccgtgt	gtgggggttg	tggattctcg	ttcttgctga	tcggctgcgg	41620
ttgcatttgg	ttcatgtccg	tcggtattgt	ggtgggaacg	caaaggctct	gcagttggag	41680
atatttggag	gttggggggg	gtgtcgtcag	catccattgt	gtaagtaacg	cttcgtcgtc	41740

ttctccaaac	caagtatgat	tttcgtgttc	gatgttcggt	cctaccgcgt	cttccagtct	41800
gtctatatta	tcggtattat	cgtcttctgt	tttatccaaa	ccgcgaataa	aatcgggtgc	41860
tatatagcgt	ctgtttgtat	ttaaaatctg	ttgaatactt	gtttgttcct	caaccttgga	41920
ttgtatatca	cgaatcttct	gttcaactga	agctatgcga	gctgcagagc	ggagctgggt	41980
atttaaactc	gcgcaggcct	cttttgcagc	agtaaaggca	tacacaaatg	ctggatcttg	42040
tacactcgca	ccccacgga	ttagatcgag	ggcccggttct	ttaaataacc	ccgcgcgggt	42100
atgcgcctca	actagtttga	cacggttacg	cctatgagaa	gcgtaggttg	gagtgtggcc	42160
tgacatgacc	aaagtgaatg	aatgcggccc	tgaaaatggt	tatgatatat	acgtaacgag	42220
tacgtaagat	gacgcggctt	cctgttttac	tgcttacaag	agatgaggcg	gattccgtga	42280
attgatgtta	aatgtcattg	ataatgtttg	gtcgtacgct	tggtgaagaa	tctgtaagat	42340
attttgaacg	tctaaagcgt	cgtagggatg	aacgccttgg	gacgttggag	tcccctaccc	42400
cgtgttccac	gcggcaaggg	tctctgggaa	acgcaacca	aatcccgttt	ctgaattttg	42460
ctatagatgt	aacccgacgt	catcaggccg	ttattcccgg	aattggaacg	cttcacaact	42520
gttgtgaata	tattccactg	ttctcggcta	ctgctcgacg	ggcaatgttt	ggcgcgtttc	42580
tatcgtcaac	aggggtacaac	tgtaccccc	atgtagtttt	gaaaccatgg	cgatattcgg	42640
taaatgcaaa	cgtaagccct	gaattaaaaa	aggctgtcag	tagtgtacag	ttttatgaat	42700
attcaccgga	agaagcagca	cctcatcgaa	atgcgtatag	cggtgttatg	aacacatttc	42760
gcgcgttttc	tctgtcggat	agtttctgtc	agttgtctac	ctttacacaa	cggttttcgt	42820
accttgtgga	aacatctttt	gagagtattg	aagagtgtgg	aagtcatggc	aaacgcgcaa	42880
aggttgacgt	tccaatctat	ggcagatata	aggggacggt	ggaactgttt	caaaaaatga	42940
tcctcatgca	caccacgcat	tttatttcat	cgggtgctatt	gggcgatcat	gccgacagag	43000
ttgactgctt	tctgcgtaca	gtgtttaaca	cgccaagtgt	ttctgacagt	gttttagaac	43060
acttcaaaca	aaaatcaact	gtgttttttg	taccacgtag	acatgggaaa	acatgggttc	43120
ttgtaccatt	aatagcttta	gtaatggcca	cgttttagagg	aattaaagtg	ggttatacgg	43180
ctcatatacg	caaagcaacg	gaaccctgtg	ttgagggtat	caagtctcgc	ctggaacagt	43240
ggtttggggc	aaattacgtg	gatcatgtaa	aaggcgaatc	tattacgttt	tcatttaccg	43300
acgggtctta	cagcacagcg	gtgttcgcgt	caagtcacaa	cacaaacgtg	agtgttttat	43360
aaatttaacc	tttaatatat	tactgtaaat	gttgacatat	acctttccac	aacggcggtt	43420
gagttaaggt	atactaggtg	gttgtaggtt	ccggttcacc	cgataatctt	tgtgtctcgg	43480
ggaagcaaat	tcgctgaagc	agaccacagc	cgttaataat	agcccggtt	aatgtttctc	43540

caaacatata	aagctgccac	ccagatgaat	ttactggtac	agagagacca	ctggcggttg	43600
ttccccgctat	aacgtcgcca	agatttgcg	taatgcgagg	atttttagta	ctcgtaattc	43660
gaatgcagg	ggtgacatct	acaaaaagaa	cctgcggtgg	gccaatgtct	acctccactt	43720
ttaattcccc	ctgaccggcc	tttctccaca	tacacggagc	ccaacacaca	caaccttccg	43780
catgatttgt	gacatgggg	aacgcataca	gtgcccccac	gtgaactcta	tgattacatt	43840
catcacatcc	gtccgcatgg	ctgaggagtc	gatttaatac	agagccaagt	atccgagcat	43900
gccatccggc	gggacatagc	cctattaaat	taggttccat	agccagtaca	tataaacgcc	43960
ttcgttcgtc	tgaccaccac	actcccggag	aaataacttt	acatgcgtat	ggatttttcg	44020
gaagccgcgg	gggttgtaag	tagttgctta	agtttggcgt	tggtgtaaga	tctgcggggg	44080
tgggatctgc	tcgaggatcc	ggaatagatg	ttggaagggg	gtacgcgatc	gggttcttaa	44140
acgttgctcc	aaaaacatgg	tctatgtttt	caaccggata	aattcttaaa	gtcgccgtca	44200
ttgcgtacga	gacctcgtaa	ttaaaattta	caattacatg	aaaagtcttc	ggaggtaagt	44260
tcatctgacg	tgggcgcgtg	atgtaaattg	tggctacaac	aacggcaata	ttagtagtat	44320
ccgtttgaag	ggggataaac	ggagcgatcc	ttaaagttat	aaaagcagtt	gatcgcat	44380
ttttcacccg	gggatcggtc	aggatggact	tccataatcc	catatccagc	gttaatgcat	44440
cgcagagtct	ctgaactgcc	tcgggggtta	atttgcgcg	tgaccccgta	gcggtgtaca	44500
gcggaaatat	gcgttgtaat	tccatgagca	gaaaaacagt	ctagcggatt	gccgcccggg	44560
tacttggtgg	tttaatgcca	cccaccgggt	tattttatat	tttaagaggg	ggtggaaacg	44620
ggagaaatga	cgtaaaatta	catatgaaga	gattctggtg	ttatgttttt	atagtgacac	44680
taattttatt	atgggggttg	ggaatagaga	agcagaatct	gtctagaata	ggtccgatta	44740
acgatgcagg	tagtgctgcc	tgtagggtat	cggtaataca	aaaacatgcc	gcaaattccc	44800
ccggtaaaac	taaaatggat	tgtaattgct	ggttaaatec	tagacaaatg	tacgcgtaac	44860
attgaccggg	taaatactta	gaacaaattc	caatatcaac	aatatccgcg	ctgcgtataa	44920
atttaccctt	cagttgtgtg	gaattaccaa	taccaacctt	ttctaaggct	acgggaacgg	44980
ggaccttgga	aagcttaagt	atttcccctc	ctgaattata	atagtcaa	aaatatatag	45040
aacgattacc	taaccagcat	gggaaggaag	cgtgaaggta	gggtatatac	cccccacctt	45100
gtggtcgtgt	atatacagat	gacagatacg	ccaaaaccgc	atacatcaag	gagctgttat	45160
aaaacgcata	cattgacatt	tccgttaaca	ccgaaactat	agtctgaatc	aggtctggtg	45220
tgccgggtac	aatttcatca	ataaccgttt	gggaagaatc	tgcaatatca	tattccatga	45280
gttggtgtag	agtcgggttc	gtttgtaact	ccgttataag	accttgggtt	agcgatgtca	45340

cacacgcttg	tttaaatacc	tggtttaaaa	acatttcggc	gcctgggttta	aaggcgggta	45400
aggggggttg	attatttagg	acgttagcca	aaaacggtaa	acgcgcgact	agctcttggc	45460
gagctgtcac	atgtaggctt	tggggattgt	caacccgggc	at ttatacac	gcagcatcaa	45520
taatagcctg	tgcagagtga	tataaaattg	gacttccggg	aatacgtcct	ccccaggcag	45580
aggatccgtt	gtaagatact	acaatcaacg	gactggggga	ttctgcgtaa	tgtcgcggta	45640
caattgatag	gggacgccgt	ttccagaaat	ctgctggagt	gtccccgcta	actaattggg	45700
cataacagat	gtcgaaccat	tccataagac	tttgggggttc	tgtcgaagct	ggggtaaaca	45760
atagaacgtc	ttgtaaaggt	gggatgctgg	cggacgaatt	gtttttcttt	cccgtaaatc	45820
gcccttgctc	aggcgggtca	aggacgccat	caaaggaacc	gttattgatc	ggatctgtgt	45880
tggaagtttg	cgctccgtgg	ccctttgcac	tttgaagcaa	cccagatgca	acgcgggaac	45940
tagaaggctg	gacgggggtg	ctggagttaa	caatgtttac	ggcccgtttt	attagctcaa	46000
ggacgtcccg	attattttcc	tgtatgcgtg	tttcagcagg	ggagtcatca	atacctccag	46060
aagttaactg	tcgatcaaga	tcgattatgg	atgaaacggg	tccaatattg	tccccatttg	46120
acgtgtgtga	ttcacccatg	gctgccacca	tatgctctgc	gtatatTTTT	atagacgatg	46180
caagacgagg	ggtgcatcgg	atatacgcaa	tcagctgttt	gcataataaa	agtaccggtt	46240
gtccatcagc	aaaataacgc	gttccgtttg	ggattagttc	tgcatacata	atacaaatat	46300
cacggtgctt	gcggtttcca	gtatttattc	gtatcgctac	aacgttaaata	gcatcaaaga	46360
ataaaccggg	gctaagataa	acaggcaatg	ataaaatcaa	tccccctgaa	ttatgcgtgg	46420
ccgaaaaaac	gtgtgaaaca	aatgggtccg	tttttggtat	taagagattt	gttaaggcgt	46480
tatcgggaat	gtacgcggcg	aaaacttgac	accacgggtc	gcattgacct	gtagcatgat	46540
atcttgtttg	tacttcaacc	ttgaagcgtt	gtccgggttt	ctttaaaatc	agtaatgcgg	46600
gatctattcc	ggccgcaata	agccccgcgt	taggtatcac	aacgtgtagt	aatccttttg	46660
tgtgatcatt	atgccaaagt	gcatgttttg	tttcatttgc	caaatgggct	tccattatac	46720
accggatatg	gttgtactgg	aaaaaaaaaa	gaaatatgta	cgtattcaaa	catttttttac	46780
gtacgtggta	tttaaggata	cattttaaact	ttgggtgggg	aactatatat	ctttctatcg	46840
ttccagggtg	tccgagggtc	agattttaat	cttctgtttg	tggatgaagc	taattttatt	46900
cgacctgatg	ctgtacaaac	tatagtcgga	tttttaaata	aaaccaattg	taaaattatt	46960
tttgtttcat	caacaaatac	cggaaaagca	agtacaagtt	ttttgtataa	cttacgtgga	47020
tcgtcggatc	agttgttaaa	cgttgttaca	tatgtatgcg	acgatcacat	gccgcgtgtt	47080
ttagcacata	gcgatgtcac	agcttgttcg	tgttatgtat	taaataagcc	ggttttcatc	47140

acaatggatg	gagccatgcg	gcgcactgca	gatttattta	tggccgactc	cttcgtgcag	47200
gaaattgtag	gtgggcgtaa	acagaattct	gggggtgtgg	ggtttgaccg	gccattattt	47260
acaaaaactg	cccgtgagag	gtttatttta	tatcggccgt	caaccgttgc	gaattgtgct	47320
atattatcgt	cagtgttgta	cgtttacgta	gacctgcat	ttacctcaaa	tacacgagcg	47380
tctggtagctg	gtgtagcgat	tggtggctcg	tataagtcgg	attggattat	atttggattg	47440
gagcactttt	ttcttagagc	tttaactggc	acgtcttcca	gtgagatagg	gcgttgcggt	47500
actcaatgct	taggccacat	actcgcttta	cacccaata	catttacaaa	cgtacacggt	47560
tctatagagg	gaaacagcag	ccaggattct	gcagttgcc	tatcgttggc	tatagcacia	47620
cagtttgctg	tcctcgaaaa	gggaaacgtg	ctatcttccg	ctccagtgtt	actgttttat	47680
cattccatac	ctcccggatg	tagcgtggcg	tacccttttt	ttttattaca	aaaacaaaaa	47740
acgccggccg	tagactattt	tgttaaacga	tttaactccg	gaaatataat	agcctcacag	47800
gagcttgtat	ccctaacagt	aaagttaggt	gtagaccccg	tggagtatct	atgtaaacag	47860
ttggataacc	tgacagaggt	aattaaaggc	ggtatgggta	atctagacac	aaaaacttac	47920
acgggtaaag	gtaccacggg	aacaatgtca	gatgatctga	tggttgcatt	aattatgtcc	47980
gtgtatatattg	gcagttcatg	tataccggat	tccgtgttta	tgcctattaa	ataaaaacia	48040
gacgcgtgaa	atgtaactag	actggttgtg	tttttattaa	cacctgttta	cacttgaatc	48100
acggccgtgc	ggtctcccgg	atgaacagta	gaggtccat	caaacacaca	gacgcgtaaa	48160
attgcgcgag	ttcccaaggt	atcccccagt	ctagatgatg	ttgatatcca	agatgaaata	48220
gtttcatata	tgggaaatcg	gcgatggccg	tcttgaatcc	gcggcattgg	cggatatatta	48280
attaactggc	cggtttctct	aacgcaattg	gcggtttgta	tcaataaatt	tacataaccg	48340
tcgtgtgctc	cttggactaa	caaagttgga	atcagcgcca	ataaaagcag	acatccctcg	48400
tttatggaaa	acattagatt	taaaaccaat	gtgcgaatag	ccgcatccga	tccgtcccga	48460
tgttgtaa	ttgtttcgag	ttcataacgc	cttccattgt	aacaaatgac	atccgcgcct	48520
cgtagaactt	cgtggggtaa	aatttgagca	cccgcggccg	tgcgctcaac	ggcccgtgca	48580
accacttttg	cgatgatttc	tcgcattaag	gtctggggga	tggttaaagg	gaaaacaatt	48640
tccagtccta	cagagtccaa	gcgaattgag	tctgcggacc	cgaaaaccgg	aggaagtaag	48700
cagatgtaat	cgccattaca	aagatcaacg	ggggatgtat	tttgaataaa	caaccgggt	48760
gtaggagtag	ccacgccaat	ggcatgcgcc	aacaactttc	ccgggatgac	ccgtgttata	48820
actgccgcga	atcgcatctg	gtatgcctct	aacagcgaga	gcgtgtctgg	tggagcaccg	48880
ttaatgtaat	atgacgacag	cgctatatcc	accagtgaag	ctcgatgacg	cagggttgag	48940

aaggtaataa	tttttccctc	acattttctgt	aatgcagatg	tttccgccgg	ggatagttct	49000
cctggtaaca	atacctctat	ctcaaattggc	atagccatgt	tgtttaagga	agcgtgaaac	49060
agaccaagtc	ggccgagcgt	atccaaatct	caagtaagat	gccaatgcgc	tctacagggc	49120
ttttattggg	agtgggtatg	tgggcgtggg	gaaattatcg	cggagagga	agacatcccc	49180
taaggggcca	cgcgtctcga	atcagatatt	gggctaagt	aacttcatct	gccccggttt	49240
ctcccgctg	agccgttcgt	aacatggccg	catcgcttga	gcatagtggg	ggatatgctt	49300
cttgaaaaag	gccacacgga	tcctgtgtca	tttcggtaga	accgggaggg	cgttttaaatt	49360
gatattcagt	gtcgggtggag	ctttgcgacg	ccacagcctt	tgcctccatt	agaagccgat	49420
ccagtgtatt	acaattagt	ttaacctccg	ctgggtgtaa	aaacttaaag	catgggctgt	49480
agataggaga	agcgcttgta	aggttgtatg	ttccggttga	tagcctgtca	ccgtatgaat	49540
gtttttgtga	tgcccatggg	ttaagagttg	ctcgatctgt	ataagcaaca	tccgattgtg	49600
tgtgatcaaa	cattatagcc	tctatgtcgg	cgtcacggtc	acccatatat	aacattccag	49660
atgctcgacc	tctaggattg	catgcagttc	taaaatattg	taggtcagtg	gacaccggca	49720
tggccacaaa	ctcacacaca	gaggcttgcc	ctcgtgcaat	tcctgccgat	gtagcaggac	49780
gtagtccgcc	gaagatgggt	aggggttcgg	tgggatttaa	gcgaccccc	gatgctgtta	49840
tacgacgcaa	cgattcggta	acgttatcat	gtaacattgg	cactcctcct	cgtgaaaaaa	49900
aaagattttg	ggcagtattg	cccatatccg	tgagagggca	tcgcagggct	gctgtggcac	49960
atacagctgt	atacccgact	cccagggtcca	cgtgagctct	gggttggggt	agggtaaagt	50020
ttaccccccc	aatagcatca	tgatgggtga	cttggatttg	tccgacaaag	tacgattcag	50080
aagcacgctc	ggcatataaa	agttgctctg	tggcaaagcg	atcctggcgc	actacggtaa	50140
aggcaatccc	ggggtgaaat	cccgttcgta	gttgatgtgt	aagagatatt	ggtgtaaact	50200
taaaataccc	tccaagaaga	gaatatgtaa	gagtattaaa	atccgactta	ctatgcgtta	50260
catggtaggc	aacgggttgg	cgtatagttg	cgtgggtggg	ggctcccaga	aaaggaggga	50320
ttgggtggtac	cattttttgcc	aaaaccgcgc	tagcattttg	cattccacgc	aatgatgcca	50380
aatgttccgg	acatgcaaac	agaggggtga	ccggaacggg	ataaaaaaaaa	gtacccggtg	50440
caatggtttc	atcgtagcc	tgatatgcca	tcataataag	gccatggtaa	agcgctccgt	50500
catatattct	catatttctg	gttggtgccc	tggcggctcc	cgcacggggg	gcgcttgata	50560
ctaaaatggc	cgtcggttcgt	tcagccatat	ctcccattaa	ctcttgtagt	gtgagcaatg	50620
catcaccatc	aacgggttagg	tgtgcattat	ggaagtaaac	gttaagagag	ttcggaacga	50680
gttgggtgtgc	gtgaagaggg	tgtcttggtg	cttctggggg	agttgggggt	tcttcatcag	50740

cggaacgata	actgcctgta	acgcagggta	taggcgatca	taacgcacgc	50800
cggaacgata	actgcctgta	acgcagggta	taggcgatca	taacgcacgc	50800
ccattgtaca	acaggaaccg	cggaataatg	caggaatgac	aataatagtag	50860
agagaatacc	ccattcacgg	tcatgggtgtg	gagtaatggg	aataaccctga	50920
cccgaacggg	tctcccgtgg	attaacacat	tatcgcgtcg	ttggaagtta	50980
tatccacaaa	gtgaagggct	tggtatccgt	ttcgcgccgt	tacacgaatt	51040
ggctctcgggc	ggcttcatca	cggtatatta	acgcatacaca	atcccataga	51100
taaacgtgtc	atccgtaagg	atgttattta	gcgcttccga	ggctctcgccg	51160
ctccttgtat	tgtaaaatcg	gttatagttt	ggcgtaatgc	tcttacatgc	51220
cccgatatat	attaatacag	acttcgggaa	gctcaccggt	tccgagatat	51280
acattaacat	gtgaaagtta	tttacaacatg	ccaccctgtg	ggattgctcc	51340
gaatacactg	tgtaaacagt	cgcagtaacg	cacagaagtt	tctttcgttt	51400
cagcctctag	catgtagaaa	atagttgggt	atgcgcggtc	ttcaaagtga	51460
ctttaatggg	tgccgggggtc	attgtatgtc	ttcccaaacc	gagttgggtt	51520
ctcgaaatga	aatgggacat	agaggcacgg	gaatgtttcc	gttgataatc	51580
cgttaacggg	tggcatggct	tccggggggac	gctgcgggtc	gggaaggtct	51640
gtgcaacaaa	aaaatcaaag	gcgggggttta	attcaaacct	tagacgcggg	51700
ctataaactg	tagaattggt	aatgttctgt	ttacccaatg	agggtgatga	51760
ctgcccacgt	ttccataaac	ctccccattt	gaacatccaa	tgtgtcctct	51820
ccacgtatac	accaaataa	cactgacgat	ctaaatgttg	ttggcggagg	51880
tggcctcgac	atcaagcaat	gaactgtggc	agatggtacc	cattgcatca	51940
actgtgttaa	tatcccatct	ttattataaa	aaaaaatccc	ttgggggtgga	52000
gatcctgttc	ggatacagtt	gaaaaatcgc	cggcgtgtcg	tgtatatctg	52060
ttgcctgaaa	cactcccatt	ggcatgataa	acgtaatatc	tatatattcca	52120
aggcaacgcg	cgtagcttgg	tagacccgcc	gttctaatac	ttctaagaat	52180
ccccacaac	cactaaatcc	gcaggaacac	gggcgttaac	cggaagccca	52240
aatcggagtt	ggattgtggg	ggatatagacg	gtatgtttta	cgtgttaggg	52300
caaggagatg	gcgggctaca	tcatccattc	cgcggacggc	ctttcccac	52360
ttaccaagtt	tgtcccctgt	agaaccattt	cgcctatagt	tactgggtacg	52420
tgtcgtcaat	ttgtaaaatt	ccctgtaata	gttgccgttt	taagggttgct	52480
acacaccgtc	aacctgccgt	ccgcgagtg	ttgtatgagt	tattcgtgat	52540

atgggttgggt	gcacgaaacc	atatccgaca	gatacgcaga	gatcagccta	ggttccctgg	52600
cgtgtcgggt	cataaaaaac	atatccgcac	agactctacg	tttgagggtcc	gaaagtaggg	52660
ccgcgcgtgc	aacacgattt	agatgtccct	cgggttggaa	tttattaatt	ggtgaaagca	52720
gcgatagcgg	tggggctttc	tccaatagaa	caccaagaag	ttgatcggca	gtgcctcgtt	52780
caaatgagtc	caaaacgggtg	cgtaaattac	gagccatctg	ttggatagct	cttatacgtg	52840
acgatgagtc	aatctctgtc	ccatcgacat	atgtgttact	taacaaactc	aacgcttccg	52900
atgcaattgc	aaacgcagcg	cttaacgaac	gcttgtgtat	ccgcttaacc	atataattat	52960
gaacaggctg	atcgacggga	tgtggggccat	cacgtgctat	catgggttgt	tgtacctcaa	53020
attgaataac	gccatctcgc	acgtaagcca	gctccggaaa	tttagtacag	atgcaagcga	53080
cagacagtcc	aagttctaga	aaacgcacaa	agtttaatgt	attgcagtat	gtccccaaaa	53140
gaatatcgaa	ttgagccgag	taaaggctgt	tatcatctga	tcgtatttgt	ttaaaaaat	53200
caaaaatgca	acggtgtgca	cacacctcta	tggttgacag	cacatttcca	gttggaatga	53260
tccccgctgg	gatgttaa	aaccagcaa	tacgatcaga	ttccgttgta	gtaatcacgt	53320
tagcgggaca	tgaaacggtt	gtcattttgt	cagcagcgtt	gcgacttgaa	tccggacgtg	53380
taaacgtgtg	cgggaacaag	aaaactgcga	gaagtttgat	gtagagtggg	acatatgtat	53440
gggtgtttcc	aagtaacacg	ggggcggtaa	ttataaatac	ccaacattat	ttttagactg	53500
aacaattata	gtacatttat	tgaatggac	taaaacgaaa	tagatgtttt	taacataaca	53560
cggacccaca	cccttggccc	aataaaggat	accgtgtcca	ccaacagtc	catagcgtaa	53620
ataactgccg	ccattaccag	taacacggct	ggacttggac	cccacgacac	aggaagtatt	53680
tttgaaacgc	tatctggaaa	aataacctca	ctttgcaagt	gtccggtaat	caaaaagaac	53740
acccgggtgt	ctataaaaag	agtataatac	gccgtaatac	aaaatagcat	tgttcgagtc	53800
acaacaataa	ttccaagcag	cagttgctgg	gatgtagata	agggtagcag	gtctgatcgt	53860
atattttctgt	agacacacaa	taacataata	ataagtcgaa	agtgatgtag	aatcgtcaga	53920
agtaaccggg	ctgtgaataa	gagcatacag	cgtgtcgctt	tatagtaaaa	aaaaaagaag	53980
atacaacata	ttggttgaat	caacaccgtg	gatataatat	aaaacacgga	gtgttgcgta	54040
aacgccgacc	tgtttacggt	agatgtgcgg	gtacatgcag	agcttaatag	taagtccgta	54100
tcacccccat	acgataacat	aaccatgggtg	ttataaagcg	gtgaattatc	actggattta	54160
cacacttttg	cgtcctcttc	ggggtgctgg	ttaaccataa	cgctaagcaa	gtcctttgtc	54220
tgttccgaga	cgcgggcttg	gggtgggttc	ataacgttca	gtcgcagttt	atagtccaaa	54280
gtaaaaatgt	tgacaaagtt	aaagccgatc	cttgtattat	gtagaatata	ccccgcctga	54340

cagactgtta taacaccctc tctaaatggt tacgtatggt tggagcatgt cacatagctg	54400
acgtgctaaa cggtaggagg tgtgggtgat tggattgatt ggatcttttc atatgacgtt	54460
aatgatacca cggtgttttg aatgtttgcg tgtagttata tattttctcat attcgggtgtg	54520
gacctaaggt tggcgatcac acgatcacgg gacggcaagt tcgagggttaa tgttccgata	54580
aacgcttttaa t atg gaa ttt cca tat cat tca acc gta tct tat aac	54627
Met Glu Phe Pro Tyr His Ser Thr Val Ser Tyr Asn	
3045 3050 3055	
ggc gta acg ttt tat ttt aac gag cgt gct acc agg gcg tat ttt	54672
Gly Val Thr Phe Tyr Phe Asn Glu Arg Ala Thr Arg Ala Tyr Phe	
3060 3065 3070	
ata tgc ggg gga tgc tta att tcc ata ccc cgc aaa cat gga ggc	54717
Ile Cys Gly Gly Cys Leu Ile Ser Ile Pro Arg Lys His Gly Gly	
3075 3080 3085	
gag atc gca aaa ttt gga cat gtt gtt cgc ggg gtc gga ccc ggt	54762
Glu Ile Ala Lys Phe Gly His Val Val Arg Gly Val Gly Pro Gly	
3090 3095 3100	
gac aga tct gtt gcc agt tac gtt cga agt gag ctc aat cgc acc	54807
Asp Arg Ser Val Ala Ser Tyr Val Arg Ser Glu Leu Asn Arg Thr	
3105 3110 3115	
ggg aag aca tgg gcg gta tca tcc aat aat aac tgc gtg ttt ttg	54852
Gly Lys Thr Trp Ala Val Ser Ser Asn Asn Asn Cys Val Phe Leu	
3120 3125 3130	
gat cga gtg gcc tta ctt gca gcg gga tcg ggg gcg gtg gat cgc	54897
Asp Arg Val Ala Leu Leu Ala Ala Gly Ser Gly Ala Val Asp Arg	
3135 3140 3145	
gac ctt tgc gga aca ttt gat gtt gaa gtg gag gac cct acg ctc	54942
Asp Leu Cys Gly Thr Phe Asp Val Glu Val Glu Asp Pro Thr Leu	
3150 3155 3160	
gca gat tat ctc gtg tcc ctc ccc gtg acg cat tta aca ttg gtg	54987
Ala Asp Tyr Leu Val Ser Leu Pro Val Thr His Leu Thr Leu Val	
3165 3170 3175	
gcg ggg gta gat gtt acg cgc gag aat aag cta aaa ttg ttt cca	55032
Ala Gly Val Asp Val Thr Arg Glu Asn Lys Leu Lys Leu Phe Pro	
3180 3185 3190	
aca ccc acc gcc att aat acc aca aat ggc ttt atg tac gta cca	55077
Thr Pro Thr Ala Ile Asn Thr Thr Asn Gly Phe Met Tyr Val Pro	
3195 3200 3205	
aac gaa gcc agt ttt tca ttg gtg tat atg cgt atg ttg gag tta	55122
Asn Glu Ala Ser Phe Ser Leu Val Tyr Met Arg Met Leu Glu Leu	
3210 3215 3220	
cca gaa agt ttg cag gag cta gtg agt gga tta ttc gac ggg acg	55167
Pro Glu Ser Leu Gln Glu Leu Val Ser Gly Leu Phe Asp Gly Thr	
3225 3230 3235	

ccc gag ata cga	gac gcg ctt aac gga	agt aac gac gat gaa	aaa	55212
Pro Glu Ile Arg	Asp Ala Leu Asn Gly	Ser Asn Asp Asp Glu	Lys	
3240	3245	3250		
aca agt ata att	gtt agt cgg cgc gct	gct gat gtg gtt acg	gaa	55257
Thr Ser Ile Ile	Val Ser Arg Arg Ala	Ala Asp Val Val Thr	Glu	
3255	3260	3265		
gac gta aaa gca	gat gat gtg ccg att	tcg ggt gaa ccg tat	tct	55302
Asp Val Lys Ala	Asp Asp Val Pro Ile	Ser Gly Glu Pro Tyr	Ser	
3270	3275	3280		
gag aaa cag cct	aga cgg cgt aag aag	tcc gat cat att aca	cta	55347
Glu Lys Gln Pro	Arg Arg Arg Lys Lys	Ser Asp His Ile Thr	Leu	
3285	3290	3295		
agt aac ttt gta	cag att agg acc atc	ccc cgg gta atg gac	att	55392
Ser Asn Phe Val	Gln Ile Arg Thr Ile	Pro Arg Val Met Asp	Ile	
3300	3305	3310		
tgg gat cct cgc	cat aaa gcc act act	cat tgt atc cgc gcg	tta	55437
Trp Asp Pro Arg	His Lys Ala Thr Thr	His Cys Ile Arg Ala	Leu	
3315	3320	3325		
tca tgt gcg gtt	ttt ttt gcg gac gag	gtt ata ttt aaa gcc	aga	55482
Ser Cys Ala Val	Phe Phe Ala Asp Glu	Val Ile Phe Lys Ala	Arg	
3330	3335	3340		
aaa tgg cct gga	ctt gaa gat gaa ctt	aat gaa gcc cgt gag	acg	55527
Lys Trp Pro Gly	Leu Glu Asp Glu Leu	Asn Glu Ala Arg Glu	Thr	
3345	3350	3355		
ata tat act gca	gtt gtt gcg gta tat	ggc gaa cgg ggg gaa	ctt	55572
Ile Tyr Thr Ala	Val Val Ala Val Tyr	Gly Glu Arg Gly Glu	Leu	
3360	3365	3370		
cca ttt ttc ggg	cat gct tac gga cgt	gat ctg acg tcc tgt	caa	55617
Pro Phe Phe Gly	His Ala Tyr Gly Arg	Asp Leu Thr Ser Cys	Gln	
3375	3380	3385		
cgg ttc gtg att	gtt caa tat ata ctg	tct cgg tgg gaa gcg	ttt	55662
Arg Phe Val Ile	Val Gln Tyr Ile Leu	Ser Arg Trp Glu Ala	Phe	
3390	3395	3400		
aat tgt tat gcc	gtt att gaa gat tta	acg cgt agt tat gtt	aac	55707
Asn Cys Tyr Ala	Val Ile Glu Asp Leu	Thr Arg Ser Tyr Val	Asn	
3405	3410	3415		
gcg tta ccc agt	gat gat gac acg gat	caa gtt gct caa gat	tta	55752
Ala Leu Pro Ser	Asp Asp Asp Thr Asp	Gln Val Ala Gln Asp	Leu	
3420	3425	3430		
ata cgg acc att	gtg gat aca gca aac	agc ctc ttg agg gaa	gtg	55797
Ile Arg Thr Ile	Val Asp Thr Ala Asn	Ser Leu Leu Arg Glu	Val	
3435	3440	3445		
ggc ttt att ggc	acg ttg gct gaa act	ttg ttg ttc tta cca	ctc	55842
Gly Phe Ile Gly	Thr Leu Ala Glu Thr	Leu Leu Phe Leu Pro	Leu	
3450	3455	3460		

ccc cag ctt ccc	tgt tac aag gaa acg	tca cat ctt gca aaa aag	55887
Pro Gln Leu Pro	Cys Tyr Lys Glu Thr	Ser His Leu Ala Lys Lys	
3465	3470	3475	
gaa ggt gtg cga	att tta cgc ctt gca	aaa aca gga gtt ggt tta	55932
Glu Gly Val Arg	Ile Leu Arg Leu Ala	Lys Thr Gly Val Gly Leu	
3480	3485	3490	
tcg gat act gtt	ccg gtt gat gtt tct	gtc acg gaa agg cat gag	55977
Ser Asp Thr Val	Pro Val Asp Val Ser	Val Thr Glu Arg His Glu	
3495	3500	3505	
tat gag ata tcc	cgg tac tta gat acc	ctg tac tct gga gac ccc	56022
Tyr Glu Ile Ser	Arg Tyr Leu Asp Thr	Leu Tyr Ser Gly Asp Pro	
3510	3515	3520	
tgc tat aac ggc	gct gtg cgt cta tgc	cgt tta ttg gga tca tca	56067
Cys Tyr Asn Gly	Ala Val Arg Leu Cys	Arg Leu Leu Gly Ser Ser	
3525	3530	3535	
att ccc att gcc	ctg tac tac aat aca	ata tcg ggt aat gcc ttt	56112
Ile Pro Ile Ala	Leu Tyr Tyr Asn Thr	Ile Ser Gly Asn Ala Phe	
3540	3545	3550	
gaa ccg tat ttt	gct ggg agg cgt tat	ata gca tat tta ggc gct	56157
Glu Pro Tyr Phe	Ala Gly Arg Arg Tyr	Ile Ala Tyr Leu Gly Ala	
3555	3560	3565	
cta ttt ttt ggt	aga gtg cac caa aca	cca ttt ggg gac ggg aaa	56202
Leu Phe Phe Gly	Arg Val His Gln Thr	Pro Phe Gly Asp Gly Lys	
3570	3575	3580	
aaa acc caa agg	tag tgtgtattat	tcgcgaataa agtattgtag agaatacgtt	56257
Lys Thr Gln Arg			
3585			
tatagtgact	ttttattata	catgtttttt atgtcagagg tattttatta tattctcgaa	56317
ggcggaatt	tccacataac	atccatccga taataccaaa cccactacc gccagaaacg	56377
cccctcctaa	agaggcccca	aggtattgtc ccgacattcg tatggcttgt cgtcgttcga	56437
atcctagaag	cgttaccaca	gttccgtttg gaaacaacaa cacagcctta gagtcatccc	56497
cgtgcatgtc	tggattgaag	ggtggaattg tggagtttcc catagcggct agttgtcggt	56557
ctgtatcttt	gctgtcaata	ataattatat ccataatcgc ccccggtggtt agatacctaa	56617
gaaaaacact	tccgcaatac	aaacattctt ttaaattgtc cggatggggc agtgcgaccg	56677
tctctatgac	accatgttca	gacacgcaag tatccctgct taaataaaca acggatatgg	56737
ggttatatac	atccacatct	gccaggggaat ataccaaacc cctttgaggt ttgtttcgtg	56797
taatcacata	actgtgtccc	tggacagctg gaagaatgag cacatattct ccgttacgcg	56857
cggctgcac	ttgacacgta	aatacttctg gtacatgggt gtggagtata tgcaaattctt	56917
tggcagtcca	tgtggtaaaa	atcatcatgg ttttaaattgc cgcgtcgaat atttcagatt	56977

cgtctagttg	ggtatgcaat	acctcgttaa	gtcctgggcg	tgttggtatt	gccgacagga	57037
gattcataac	atgaatctct	tccgtgaggt	ctgtacgaag	ggaacccata	caaggactgt	57097
atacgtttgg	tattgtaaac	atgtgttttg	aaggatttaa	gtagccagg	ccttcttgta	57157
tgttaagtgc	tgcttgcggt	gcgtgagctg	ccgtacacat	ggatgtcatt	aaaagcaaag	57217
ttgtgcgacc	gtctaatacc	cgagatgaat	tttctagtcc	ttcgcggaaa	tttaataaaa	57277
tcattgaggc	aaaaaataaa	gcctgcctct	ctgtagcatt	taaattttgc	ttcacaagca	57337
gcccccttgta	tatgctcatt	ataacacgcc	tggcgagaga	aagtgcattc	acatggctct	57397
gaccacggga	aagcgcgtat	gcggtcttta	gttgatcacg	ggcttcatca	tatgaaataa	57457
aataatcgac	atttgcggtt	tttacctgac	caaaaagaag	tgaaagtctg	tcatgaagct	57517
gcgatggatc	ggcaaagatc	agatccgagg	ttccggatat	agtgttgga	tgagctcctg	57577
ctcctatccg	cattaaaatg	taattaagga	attttaattg	atactgaaca	tctacgatct	57637
catctaacag	aaaatattct	gtgggtacggc	ccatttccga	caacgcaaaa	attgatgtgg	57697
ctattcttgc	ggcgatatgg	taatagcttt	cctcgtttat	gtcatgttga	tccgccttcg	57757
ttgtcatccg	cagagcctcc	gtgtgggcca	tggataaatg	atagcggtaa	tccaaactct	57817
cttcgggata	tgcgcatata	tcgaccgtag	catgctttga	aaaattcata	tccaaccac	57877
gtccaagtaa	ataaactcga	taagatggcc	ccggatccgg	acccggtgga	tttagctgga	57937
accatgtggt	gtcgcttgta	accgcgttca	gttttactgt	atgtggtaca	acaattaatt	57997
ctatcggtgg	tccagaggat	aaagaaatga	gcgagctcat	aaatcctaca	ccaatattta	58057
cttcacacag	acccgagtcg	cttgtgagaa	gcaccgaacc	ggtggcccag	tatcgaattg	58117
gccataccga	cccaaaaagg	ggaacgtgta	ttctcaacgt	tgagttggtg	ataattgctt	58177
cggcagaaaa	aaaagtatgt	cgggcaaggg	catcccatgt	agcaaaatgc	gctttatgtt	58237
ccagaatagt	attcttgggg	actgttgggc	gagcgggtaa	aagacttacc	ccaaacggcc	58297
tttctgcagt	tgctgcgggtc	tcagctcttt	ccaaatgcca	tacaaggggg	tttggtggga	58357
acgtagtaaa	cgcaacaaga	tgttgcgtag	ttaaatacgg	cgcaaacgaa	ctgtcaaaga	58417
agctcacgtc	gggtgtcaca	gggtgactaa	gaaatccaaa	acgtccagca	ggaaacgggtg	58477
ctcgatgttc	tgctttgaaa	tggtatggcg	ataacaagta	ttttggaaat	ataaccagcc	58537
cgacgtctcc	ttcgtgtgtt	gtaggggttaa	ccttaacaat	aaccaagaaa	acgtgttttc	58597
tatcatttcc	ccagtgaagt	gatttaaatga	gttcttcatc	gaaaccagta	ggataaaaagg	58657
cttctaattt	cagagacata	ttacggtcgg	aatattctcg	tagaagagca	gacatatgtc	58717
cgatagagcg	agtcgcaggg	gttggtgtta	cgtaagattt	attagccgtg	gtccaaagag	58777

gaagaattac caccgctaaa actagcgcaa acatagtcgc tgttacttgc gctacaatat	58837
caccgcaacg ttatgcacac agcgtgcctt taccctcct caccaccaa caggcttggc	58897
ggcttttaat attaccactc cgtttttaggg agataaaggc gggattaaag gatgtggtaa	58957
taaatgacgc atatataaaa aagaaaaaca cgtacacgcg agtatgacaa tgtgtatcat	59017
ctttttactg gtacatacgt aaatactagg tatatttagg aagtgttgtc ctgaacggca	59077
ttaacaagct ctttcaatat attccatgca ccggaggaca tgtttgccgg ggtcatctgg	59137
ggtagcagag ttttttagttc ttgtgccgca tgctgggggtg tctgttctaa cgataatacg	59197
aacggagaca tgcttcgtga gcagtttgaa agggctctcca ttcccatgc ccataacggc	59257
agaatatttc caaactctcc gcaaagctcc ggaagttaa gcacggcgaa taacgtgtct	59317
tcaatcccag gtacttcgcg tagttttata cactcggatt tttgtaattt ctgtttaaat	59377
acatcattac aaaatgacag tgtgttccag cccgcgtgcc agttgttagt ttaagaaat	59437
ataattgtat taataagcat tatatatata tttctcagaa ccataacaaa cggcagatta	59497
accgtttctc ccggtctggc ccgtttgctt actctggata aatgactggg gagtgaaacg	59557
gtacaaacta ccaagttggg cccgggggggt tcagcgggaa gcgtaaacaa taaccagga	59617
agcgccgctg gggacatatc tcccactaag tatctggaca agggaaaaca tatagttgag	59677
gcgattgggt gtcggtcgga taacataatt ttatacggct ccttatttac ttgtacgaga	59737
tccgatgtac ttgtgtccat caatgccgag attttcgcat gcataattgc atgcggagaa	59797
cagaacaggc tctgaaaatg agccgtgagg cgttgtgcgt cttcaggcga aacgtctcca	59857
ttaagacggc gagtttgtgt tccgtaaatt ccgcaaattg cgctcctccc tgcaaggtta	59917
cgccaatacg acaggggctc cccaatgagt aagatccggg ttggtgttat tgcaaagtgg	59977
tgtaaaaatt cttcggcggc ggttgttttt ccaattccat acgccccgtc caaataaata	60037
cgcaaaacgc ccatttttac atcggtttta tccgttgaca tgtttattgt agacaaacgc	60097
gtcttagggt atcttctggg acggaacttc aaat atg tcc gct agt cga att	60149
	Met Ser Ala Ser Arg Ile
	3590
cgg gcc aag tgt ttt cgt ttg gga caa cgt tgc cac act cgt ttt	60194
Arg Ala Lys Cys Phe Arg Leu Gly Gln Arg Cys His Thr Arg Phe	
	3595 3600 3605
tac gat gta ctc aaa aag gat att gat aac gta cgt cga ggt ttc	60239
Tyr Asp Val Leu Lys Lys Asp Ile Asp Asn Val Arg Arg Gly Phe	
	3610 3615 3620
gcg gac gcg ttc aac ccg agg ctg gca aaa ctc ctg tcg ccg tta	60284
Ala Asp Ala Phe Asn Pro Arg Leu Ala Lys Leu Leu Ser Pro Leu	
	3625 3630 3635

tcc cac gtg gat gtt caa agg gct gta cgc ata tca atg tcg ttt	60329
Ser His Val Asp Val Gln Arg Ala Val Arg Ile Ser Met Ser Phe	
3640 3645 3650	
gaa gta aat ttg gga cgc cga cgc ccc gat tgt gtt tgt att ata	60374
Glu Val Asn Leu Gly Arg Arg Arg Pro Asp Cys Val Cys Ile Ile	
3655 3660 3665	
caa acg gaa tcc agt ggt gcc gga aag acc gtt tgt ttt ata gtg	60419
Gln Thr Glu Ser Ser Gly Ala Gly Lys Thr Val Cys Phe Ile Val	
3670 3675 3680	
gaa tta aaa tct tgc cgt ttt agc gct aat ata cat acc cct act	60464
Glu Leu Lys Ser Cys Arg Phe Ser Ala Asn Ile His Thr Pro Thr	
3685 3690 3695	
aag tat cac cag ttt tgc gag ggt atg cgc cag ctg agg gat acc	60509
Lys Tyr His Gln Phe Cys Glu Gly Met Arg Gln Leu Arg Asp Thr	
3700 3705 3710	
atg gct tta ata aag gaa acc aca ccc acg gga tct gat gaa ata	60554
Met Ala Leu Ile Lys Glu Thr Thr Pro Thr Gly Ser Asp Glu Ile	
3715 3720 3725	
atg gtg acc ccc ctc ctt gtg ttt gta tct caa cgg ggt ctg aac	60599
Met Val Thr Pro Leu Leu Val Phe Val Ser Gln Arg Gly Leu Asn	
3730 3735 3740	
ctg tta cag gta act cgg tta ccc cca aag gtg att cat gga aac	60644
Leu Leu Gln Val Thr Arg Leu Pro Pro Lys Val Ile His Gly Asn	
3745 3750 3755	
ctt gtt atg cta gcg tcg cat ttg gag aat gta gcg gaa tat acc	60689
Leu Val Met Leu Ala Ser His Leu Glu Asn Val Ala Glu Tyr Thr	
3760 3765 3770	
ccc ccg ata agg tcc gtt aga gag cga aga cgt cta tgc aaa aag	60734
Pro Pro Ile Arg Ser Val Arg Glu Arg Arg Arg Leu Cys Lys Lys	
3775 3780 3785	
aaa att cac gta tgt tct ctt gcg aaa aag cgt gcg aaa tca tgc	60779
Lys Ile His Val Cys Ser Leu Ala Lys Lys Arg Ala Lys Ser Cys	
3790 3795 3800	
cat cgt tcc gct tta aca aag ttt gaa gaa aat gca gct tgt ggg	60824
His Arg Ser Ala Leu Thr Lys Phe Glu Glu Asn Ala Ala Cys Gly	
3805 3810 3815	
gtg gat tta ccc ctt aga agg cct tct tta ggt gct tgt ggt gga	60869
Val Asp Leu Pro Leu Arg Arg Pro Ser Leu Gly Ala Cys Gly Gly	
3820 3825 3830	
att tta caa agt ata acc ggg atg ttt tcc cat ggg taa gaaaacagct	60918
Ile Leu Gln Ser Ile Thr Gly Met Phe Ser His Gly	
3835 3840	
tttaaagcag taccgggttta tattcacgcc agttgacttt gtttgctgca gacacc atg	60977
Met	

acg Thr 3845	gcg Ala	aga Arg	tat Tyr	ggg Gly	ttc Phe 3850	gga Gly	tct Ser	atc Ile	tcg Ser	ttt Phe 3855	ccg Pro	aat Asn	aaa Lys	tgt Cys	61022
ggg Gly 3860	ata Ile	ttt Phe	ttg Leu	tct Ser	acc Thr 3865	act Thr	aag Lys	aac Asn	ttt Phe	ata Ile 3870	gcc Ala	ccc Pro	aac Asn	ttc Phe	61067
ccc Pro 3875	ata Ile	cac His	tac Tyr	tgg Trp	acg Thr 3880	gct Ala	ccc Pro	gcg Ala	ttt Phe	gag Glu 3885	tta Leu	aga Arg	ggg Gly	cgt Arg	61112
atg Met 3890	aat Asn	ccc Pro	gat Asp	ttg Leu	gaa Glu 3895	aaa Lys	aat Asn	acg Thr	tta Leu	acg Thr 3900	tta Leu	aaa Lys	aat Asn	gcg Ala	61157
gcg Ala 3905	gcc Ala	gtt Val	gcc Ala	gca Ala	tta Leu 3910	gac Asp	aac Asn	ctt Leu	cgc Arg	ggg Gly 3915	gaa Glu	acg Thr	att Ile	acg Thr	61202
tta Leu 3920	cca Pro	acg Thr	gaa Glu	ata Ile	gat Asp 3925	cgt Arg	cgt Arg	tta Leu	aag Lys	ccc Pro 3930	ctc Leu	gaa Glu	gaa Glu	caa Gln	61247
cta Leu 3935	acg Thr	cgc Arg	atg Met	gcc Ala	aag Lys 3940	gtt Val	ttg Leu	gat Asp	tcc Ser	ctg Leu 3945	gag Glu	acg Thr	gct Ala	gct Ala	61292
gcc Ala 3950	gag Glu	gcg Ala	gaa Glu	gaa Glu	gca Ala 3955	gat Asp	gca Ala	caa Gln	tct Ser	gag Glu 3960	gaa Glu	tgt Cys	aca Thr	cgt Arg	61337
aca Thr 3965	gaa Glu	ata Ile	ata Ile	cgc Arg	aat Asn 3970	gag Glu	tct Ser	ata Ile	cac His	ccc Pro 3975	gag Glu	gta Val	cag Gln	att Ile	61382
gcc Ala 3980	aaa Lys	aat Asn	gat Asp	gca Ala	ccg Pro 3985	ttg Leu	cag Gln	tac Tyr	gat Asp	aca Thr 3990	aac Asn	ttt Phe	caa Gln	gtg Val	61427
gat Asp 3995	ttt Phe	atc Ile	acc Thr	ctg Leu	gtg Val 4000	tac Tyr	ttg Leu	gga Gly	agg Arg	gca Ala 4005	agg Arg	ggc Gly	aat Asn	aac Asn	61472
tct Ser 4010	cca Pro	ggg Gly	att Ile	gtt Val	ttc Phe 4015	ggg Gly	cca Pro	tgg Trp	tat Tyr	cgt Arg 4020	act Thr	ctg Leu	cag Gln	gaa Glu	61517
cgg Arg 4025	ctt Leu	gtg Val	tta Leu	gat Asp	agg Arg 4030	ccc Pro	gta Val	gct Ala	gca Ala	cgc Arg 4035	gga Gly	gtt Val	gat Asp	tgt Cys	61562
aaa Lys 4040	gac Asp	ggg Gly	cgc Arg	att Ile	tcc Ser 4045	cgt Arg	acg Thr	ttt Phe	atg Met	aac Asn 4050	aca Thr	acg Thr	gta Val	aca Thr	61607
tgt Cys 4055	cta Leu	cag Gln	tcc Ser	gcc Ala	ggg Gly 4060	aga Arg	atg Met	tat Tyr	gtt Val	gga Gly 4065	gat Asp	aga Arg	gcg Ala	tac Tyr	61652

tcc Ser 4070	gcg Ala	ttc Phe	gag Glu	tgt Cys	gcg Ala 4075	gta Val	tta Leu	tgt Cys	tta Leu	tat Tyr 4080	tta Leu	atg Met	tat Tyr	agg Arg	61697
aca Thr 4085	tct Ser	aat Asn	agt Ser	gtc Val	cac His 4090	gaa Glu	cct Pro	caa Gln	gtt Val	tcg Ser 4095	tcc Ser	ttc Phe	ggg Gly	aac Asn	61742
ctt Leu 4100	ata Ile	gag Glu	cac His	cta Leu	ccg Pro 4105	gaa Glu	tat Tyr	act Thr	gag Glu	aca Thr 4110	ttt Phe	gtg Val	aat Asn	tat Tyr	61787
atg Met 4115	aca Thr	aca Thr	cac His	gaa Glu	aat Asn 4120	aaa Lys	aac Asn	agt Ser	tat Tyr	caa Gln 4125	ttt Phe	tgc Cys	tat Tyr	gat Asp	61832
cgt Arg 4130	cta Leu	cca Pro	cgc Arg	gac Asp	cag Gln 4135	ttt Phe	cat His	gct Ala	cgt Arg	ggg Gly 4140	ggg Gly	cgg Arg	tat Tyr	gat Asp	61877
caa Gln 4145	ggc Gly	gcc Ala	tta Leu	acg Thr	tca Ser 4150	cat His	tct Ser	gtt Val	atg Met	gat Asp 4155	gcg Ala	ctt Leu	ata Ile	cgg Arg	61922
ttg Leu 4160	cag Gln	gtc Val	cta Leu	ccg Pro	cct Pro 4165	gca Ala	cct Pro	gga Gly	cag Gln	ttt Phe 4170	aat Asn	cct Pro	ggg Gly	gtt Val	61967
aat Asn 4175	gac Asp	att Ile	att Ile	gat Asp	cgc Arg 4180	aat Asn	cat His	acc Thr	gca Ala	tat Tyr 4185	gtg Val	gac Asp	aag Lys	att Ile	62012
caa Gln 4190	cag Gln	gcg Ala	gcc Ala	gcg Ala	gcg Ala 4195	tat Tyr	tta Leu	gaa Glu	cgg Arg	gcc Ala 4200	caa Gln	aac Asn	gtg Val	ttt Phe	62057
ctt Leu 4205	atg Met	gaa Glu	gac Asp	caa Gln	act Thr 4210	cta Leu	tta Leu	agg Arg	tta Leu	aca Thr 4215	att Ile	gac Asp	acg Thr	att Ile	62102
acg Thr 4220	gcg Ala	tta Leu	tta Leu	tta Leu	tta Leu 4225	agg Arg	cgc Arg	tta Leu	tta Leu	tgg Trp 4230	aac Asn	ggg Gly	aac Asn	gta Val	62147
tac Tyr 4235	gga Gly	gat Asp	aaa Lys	cta Leu	aaa Lys 4240	aat Asn	aat Asn	ttt Phe	caa Gln	ctg Leu 4245	ggg Gly	ttg Leu	att Ile	gtg Val	62192
tca Ser 4250	gaa Glu	gca Ala	aca Thr	gga Gly	acc Thr 4255	cct Pro	acc Thr	aac Asn	aat Asn	gta Val 4260	atc Ile	ttg Leu	cgc Arg	gga Gly	62237
gcg Ala 4265	acg Thr	ggg Gly	ttt Phe	gat Asp	ggg Gly 4270	aag Lys	ttt Phe	aaa Lys	agc Ser	ggg Gly 4275	aat Asn	aat Asn	aac Asn	ttt Phe	62282
caa Gln 4280	ttt Phe	tta Leu	tgt Cys	gaa Glu	cga Arg 4285	tat Tyr	ata Ile	gca Ala	cca Pro	ctg Leu 4290	tat Tyr	acg Thr	tta Leu	aat Asn	62327

cgg Arg 4295	acc Thr	aca Thr	gag Glu	ctg Leu	act Thr 4300	gaa Glu	atg Met	ttt Phe	cct Pro	gga Gly 4305	tta Leu	gtt Val	gct Ala	ctt Leu	62372
tgt Cys 4310	tta Leu	gac Asp	gcg Ala	cat His	acc Thr 4315	cag Gln	ctt Leu	agt Ser	cgt Arg	gga Gly 4320	agt Ser	tta Leu	gga Gly	aga Arg	62417
acc Thr 4325	gta Val	ata Ile	gat Asp	att Ile	tct Ser 4330	tct Ser	gga Gly	cag Gln	tac Tyr	caa Gln 4335	gat Asp	cgg Arg	ctc Leu	ata Ile	62462
agc Ser 4340	tta Leu	att Ile	gca Ala	ttg Leu	gaa Glu 4345	tta Leu	gaa Glu	cac His	cgc Arg	cga Arg 4350	caa Gln	aat Asn	gtt Val	aca Thr	62507
tcc Ser 4355	cta Leu	ccc Pro	ata Ile	gcc Ala	gcc Ala 4360	gtg Val	gta Val	tca Ser	ata Ile	cat His 4365	gac Asp	agt Ser	gtt Val	atg Met	62552
ttg Leu 4370	caa Gln	tat Tyr	gaa Glu	cgg Arg	gga Gly 4375	ctt Leu	gga Gly	atg Met	tta Leu	atg Met 4380	cac His	caa Gln	ccg Pro	cgt Arg	62597
gta Val 4385	agg Arg	gcg Ala	gca Ala	ttg Leu	gaa Glu 4390	gaa Glu	agt Ser	cgc Arg	cgc Arg	ctt Leu 4395	gcg Ala	cag Gln	ttc Phe	aac Asn	62642
gtt Val 4400	aac Asn	agt Ser	gac Asp	tat Tyr	gat Asp 4405	ctt Leu	cta Leu	tat Tyr	ttt Phe	gtc Val 4410	tgt Cys	ttg Leu	ggg Gly	gtc Val	62687
att Ile 4415	cct Pro	cag Gln	ttt Phe	gcc Ala	tcc Ser 4420	aca Thr	ccg Pro	tga	gtattcacta	tccgggtccgt					62734
gggggtgttta	ta	atg	gct	gct	gaa	gct	gac	gaa	gag	aac	tgt	gaa	gcg		62782
		Met	Ala	Ala		Glu	Ala	Asp	Glu	Glu	Asn	Cys	Glu	Ala	
					4425					4430					
tta Leu 4435	tac Tyr	gtg Val	gct Ala	ggg Gly	tat Tyr 4440	tta Leu	gcc Ala	tta Leu	tat Tyr	tca Ser 4445	aag Lys	gac Asp	gaa Glu	ggg Gly	62827
gaa Glu 4450	tta Leu	aat Asn	att Ile	acc Thr	cca Pro 4455	gag Glu	att Ile	gtg Val	cgg Arg	tcc Ser 4460	gct Ala	ttg Leu	ccg Pro	cct Pro	62872
act Thr 4465	agt Ser	aaa Lys	ata Ile	cca Pro	ata Ile 4470	aac Asn	atc Ile	gat Asp	cat His	cga Arg 4475	aaa Lys	gac Asp	tgt Cys	gtc Val	62917
gtg Val 4480	ggg Gly	gaa Glu	gta Val	atc Ile	gca Ala 4485	atc Ile	att Ile	gag Glu	gac Asp	ata Ile 4490	cgc Arg	gga Gly	cct Pro	ttt Phe	62962
ttt Phe 4495	ttg Leu	ggg Gly	atc Ile	gtt Val	aga Arg 4500	tgc Cys	cct Pro	caa Gln	cta Leu	cat His 4505	gcg Ala	gtg Val	ctg Leu	ttt Phe	63007

gaa Glu 4510	gcg Ala	gcc Ala	cat His	tcg Ser	aat Asn 4515	ttt Phe	ttt Phe	gga Gly	aat Asn	aga Arg 4520	gat Asp	tct Ser	gta Val	tta Leu	63052
tct Ser 4525	ccg Pro	cta Leu	gaa Glu	cgt Arg	gcg Ala 4530	tta Leu	tac Tyr	ttg Leu	gtc Val	aca Thr 4535	aat Asn	tac Tyr	tta Leu	ccc Pro	63097
tcc Ser 4540	gta Val	tcc Ser	ctg Leu	tct Ser	tca Ser 4545	aaa Lys	cga Arg	ttg Leu	tcc Ser	ccg Pro 4550	aat Asn	gag Glu	ata Ile	cca Pro	63142
gac Asp 4555	ggg Gly	aat Asn	ttt Phe	ttt Phe	acc Thr 4560	cat His	gtt Val	gcg Ala	tta Leu	tgt Cys 4565	gtt Val	gtt Val	gga Gly	aga Arg	63187
cgc Arg 4570	gtt Val	gga Gly	aca Thr	gtg Val	gtc Val 4575	aat Asn	tat Tyr	gac Asp	tgt Cys	acc Thr 4580	ccg Pro	gaa Glu	tct Ser	tca Ser	63232
att Ile 4585	gaa Glu	cca Pro	ttc Phe	cgg Arg	gtt Val 4590	tta Leu	tcg Ser	atg Met	gaa Glu	agt Ser 4595	aaa Lys	gcg Ala	cgg Arg	tta Leu	63277
ttg Leu 4600	tcg Ser	ctg Leu	gtt Val	aaa Lys	gac Asp 4605	tac Tyr	gcg Ala	ggg Gly	tta Leu	aat Asn 4610	aaa Lys	gta Val	tgg Trp	aag Lys	63322
gtt Val 4615	agc Ser	gaa Glu	gat Asp	aaa Lys	ctc Leu 4620	gcc Ala	aag Lys	gtg Val	tta Leu	tta Leu 4625	tcc Ser	aca Thr	gcc Ala	gtg Val	63367
aac Asn 4630	aat Asn	atg Met	ctt Leu	tta Leu	aga Arg 4635	gat Asp	aga Arg	tgg Trp	gac Asp	gtg Val 4640	gtt Val	gca Ala	aaa Lys	cgt Arg	63412
aga Arg 4645	cgc Arg	gaa Glu	gcc Ala	gga Gly	att Ile 4650	atg Met	ggg Gly	cac His	gtt Val	tat Tyr 4655	ctt Leu	cag Gln	gct Ala	agc Ser	63457
acc Thr 4660	gga Gly	tat Tyr	gga Gly	ctt Leu	gct Ala 4665	cgg Arg	ata Ile	acc Thr	aac Asn	gtt Val 4670	aat Asn	ggg Gly	gtg Val	gag Glu	63502
tct Ser 4675	aaa Lys	tta Leu	ccc Pro	aac Asn	gcg Ala 4680	ggg Gly	gtt Val	ata Ile	aac Asn	gcc Ala 4685	aca Thr	ttc Phe	cac His	ccc Pro	63547
ggc Gly 4690	ggg Gly	ccc Pro	ata Ile	tac Tyr	gat Asp 4695	ctc Leu	gcg Ala	ttg Leu	ggg Gly	gtt Val 4700	ggg Gly	gaa Glu	tca Ser	aat Asn	63592
gaa Glu 4705	gat Asp	tgt Cys	gaa Glu	aag Lys	act Thr 4710	gtt Val	ccg Pro	cat His	tta Leu	aag Lys 4715	gtt Val	acg Thr	cag Gln	ttg Leu	63637
tgt Cys 4720	agg Arg	aac Asn	gac Asp	agc Ser	gat Asp 4725	atg Met	gct Ala	tct Ser	gta Val	gca Ala 4730	ggg Gly	aac Asn	gct Ala	agt Ser	63682

aat Asn 4735	atc Ile	tca Ser	cca Pro	cag Gln	ccc Pro 4740	ccg Pro	tcg Ser	ggc Gly	gtt Val	cca Pro 4745	acc Thr	gga Gly	ggg Gly	gaa Glu	63727
ttt Phe 4750	gta Val	ctg Leu	ata Ile	cct Pro	acc Thr 4755	gcg Ala	tat Tyr	tat Tyr	tca Ser	cag Gln 4760	ctg Leu	tta Leu	acc Thr	ggg Gly	63772
cag Gln 4765	act Thr	aaa Lys	aat Asn	ccg Pro	cag Gln 4770	gta Val	tca Ser	att Ile	gga Gly	gct Ala 4775	cca Pro	aat Asn	aac Asn	gga Gly	63817
cag Gln 4780	tat Tyr	atc Ile	gtc Val	ggg Gly	cca Pro 4785	tat Tyr	gga Gly	tct Ser	cca Pro	cac His 4790	ccg Pro	cct Pro	gcc Ala	ttc Phe	63862
cca Pro 4795	cct Pro	aat Asn	aca Thr	ggg Gly	ggg Gly 4800	tat Tyr	ggg Gly	tgc Cys	cct Pro	ccg Pro 4805	gga Gly	cac His	ttc Phe	ggg Gly	63907
gga Gly 4810	ccg Pro	tac Tyr	ggg Gly	ttt Phe	ccg Pro 4815	gga Gly	tat Tyr	cca Pro	cca Pro	ccc Pro 4820	aat Asn	cgt Arg	ttg Leu	gaa Glu	63952
atg Met 4825	caa Gln	atg Met	tcc Ser	gca Ala	ttt Phe 4830	atg Met	aac Asn	gca Ala	ttg Leu	gcc Ala 4835	gcc Ala	gaa Glu	cgg Arg	ggg Gly	63997
att Ile 4840	gac Asp	ttg Leu	cag Gln	acc Thr	ccg Pro 4845	tgt Cys	gta Val	aat Asn	ttt Phe	cca Pro 4850	gac Asp	aaa Lys	acc Thr	gat Asp	64042
gtc Val 4855	cgt Arg	cgt Arg	cca Pro	gga Gly	aaa Lys 4860	cgg Arg	gat Asp	ttc Phe	aag Lys	agc Ser 4865	atg Met	gat Asp	caa Gln	agg Arg	64087
gaa Glu 4870	ttg Leu	gat Asp	tct Ser	ttt Phe	tat Tyr 4875	agt Ser	ggg Gly	gag Glu	tct Ser	caa Gln 4880	atg Met	gac Asp	gga Gly	gag Glu	64132
ttt Phe 4885	ccc Pro	tca Ser	aat Asn	ata Ile	tat Tyr 4890	ttt Phe	ccc Pro	ggg Gly	gaa Glu	cca Pro 4895	acg Thr	tat Tyr	ata Ile	acg Thr	64177
cat His 4900	cgg Arg	aga Arg	cgt Arg	cga Arg	gtt Val 4905	tct Ser	cca Pro	tca Ser	tat Tyr	tgg Trp 4910	cag Gln	agg Arg	aga Arg	cac His	64222
aga Arg 4915	gtt Val	tct Ser	aat Asn	ggg Gly	cag Gln 4920	cac His	gaa Glu	gag Glu	ctt Leu	gct Ala 4925	ggg Gly	gtt Val	gtg Val	gca Ala	64267
aaa Lys 4930	ctg Leu	caa Gln	cag Gln	gag Glu	gtt Val 4935	aca Thr	gag Glu	cta Leu	aaa Lys	tca Ser 4940	caa Gln	aat Asn	ggg Gly	aca Thr	64312
caa Gln 4945	atg Met	cct Pro	ttg Leu	tcg Ser	cac His 4950	cat His	aca Thr	aat Asn	ata Ile	cca Pro 4955	gag Glu	ggg Gly	aca Thr	cgg Arg	64357

gat	cct	cga	ata	tcg	att	tta	tta	aaa	cag	ctt	caa	agc	gtt	tcg	64402
Asp	Pro	Arg	Ile	Ser	Ile	Leu	Leu	Lys	Gln	Leu	Gln	Ser	Val	Ser	
4960					4965					4970					
ggt	cta	tgc	tca	tcc	caa	aat	aca	aca	agc	acc	cca	cat	aca	gat	64447
Gly	Leu	Cys	Ser	Ser	Gln	Asn	Thr	Thr	Ser	Thr	Pro	His	Thr	Asp	
4975					4980					4985					
aca	ggt	gga	caa	gat	gta	aat	gca	gtg	gag	gcg	agt	tcc	aag	gcc	64492
Thr	Val	Gly	Gln	Asp	Val	Asn	Ala	Val	Glu	Ala	Ser	Ser	Lys	Ala	
4990					4995					5000					
cct	tta	ata	cag	ggg	tcc	acg	gca	gac	gac	gcc	gat	atg	ttt	gca	64537
Pro	Leu	Ile	Gln	Gly	Ser	Thr	Ala	Asp	Asp	Ala	Asp	Met	Phe	Ala	
5005					5010					5015					
aat	cag	atg	atg	gtg	ggg	cgg	tgt	taa	cca	caa	ata	aa	agt	tattac	64584
Asn	Gln	Met	Met	Val	Gly	Arg	Cys								
5020					5025										
attcataaaa ggcgtgtttg gttttttttt ttttgtttaag cggtgtcgtg tttaaacaac															64644
agaaggcgtt tttatgggtg gtaagggtttt atttaagtta aatttaatcg gtgtcagaat															64704
cttcateccc tgatgatggt tgttctcggt ctggaataat atatggcgcc atccattttt															64764
cctctggggg atccggaaac acacgcggga tgcaaaccce tcgacccgtt ataatctcca															64824
gtgccagtga aatatgacgg ccccttgac atgtgtttta gtagtcgtat tggctgtcgc															64884
ggttaaggcg aaaaggtttc gttgcacatg ctgcacaggt tagctgtccc acagaacata															64944
cgtctcgggg tgtaccgtcg cggggtaatt gtaccggcgt gtgttctaac ctatcttcat															65004
aaatcgcggg gggagaatct tttactgttt cattgagact tgaagcgac tgtttggacg															65064
gatgatgtgc gatagacgac gggtgttgta gcgcgttaat gtagacgat tccataataa															65124
ccccgttaag atatcgggtg cggtagaggt acaaaacgcg ttttgtatat tatcgggtat															65184
aaatacccc tgtgatgcgt aatggagaca catgagtaac gtaatacaca tttttattaa															65244
taaattaaaa caaaccctt ggctatttac acccccggtta cattctcggt gcgaacacgg															65304
gagtatcctc ggcgatttcg taaagcaagg ccggttaagac gtgaagttaa aagggcgcta															65364
gtcttatttt ttttgcgggc tttagattct tggcgctcag ccgcagatac taacgtcata															65424
tatttaataca tttcctgggc ttctcgaaat ttatcgggat caaaccgcgt atttaccgac															65484
ggttcagtgt tttgtgagtc gccaatctt tctattgggg tatcagtagc gttgggtttc															65544
tcggcaaagg gatccattcc ttccggtaac tgttttaacc ccttggttgt gagggtatat															65604
aatgccttca tcgggcttgt ttttaagttta agcacgtacc ggtacgcaaa aaaggccgct															65664
accagtcccc ccaaaaccaa taatcccacg gccaatgccc caaatgggtt agataaaaac															65724
gtggtaaatac cgtgtacggt ggaaagcagc gctcccgtgg cccaagaac cacatgtcca															65784

acggcctggc	ccgcggtccc	aagtccctgg	aaaaactgag	ccatgccctg	cataatggcc	65844
gttccgctat	catattgcac	aaccttgtct	atgtcataaa	aacgcagcga	atgcatttga	65904
tttcggcggt	gaatttcact	gtagtctagt	aatcctgtat	cccgcagctc	gtctcttgta	65964
tatacttgca	gcggcataaa	ctctctatct	ttaagaagtg	ttaagtttaa	atctacgtaa	66024
gtgctaata	ttcccacatc	atggactgcg	atttcacgga	cgtaacgata	atcctcataa	66084
tatacgtagt	gatgcccaaa	tagaaaatat	cgcttgtgat	tagccacgca	tggttctaac	66144
agatctctgg	acataattaa	ctcgttatct	gttccaagct	ggccctccac	cgtcccggac	66204
ccatttaaac	taactattga	aattaaagga	cggctataac	aacgcgtagt	actaccagat	66264
accctcatag	agttttgaag	tataatgcgt	gtatctgata	ccagttctgg	acaattagaa	66324
acggagataa	cgtcgccgag	aatacgagct	ttaacacggt	gatccaaaat	ggtgctcgct	66384
aaagcacttg	ggttaattgg	aatagtcctg	ctccaaaggg	cgcgttcgcg	attttgtagc	66444
tggcaccacg	acgaggagat	acgtgccaac	atttcattaa	catgctcttg	aatgtgggtca	66504
tatgtaaact	ggagcatagc	aaattccacc	gatgaggtgg	ttgttattgt	tctattggca	66564
cgcaactcaa	ctggcacgct	tcgtcgggat	ctggtatttc	gagtcgggtg	tttttgtggt	66624
gaatgattag	tgttttcacg	gaccaattct	tggagataga	gacgggagag	ggaattgctc	66684
agcagggggt	gaaacaccac	aacaaacccc	cctctggcaa	ggtaggtctg	gatatccccg	66744
gttctaacat	gagatgagtt	gtatctgggt	gtatagatcc	ggtaataaat	agcccgggct	66804
tcctccttta	cacattgact	gagatggatt	tggtaagat	taaactcggt	tgtttcactt	66864
ataaacgtgg	tagaaagtgt	tttcattgta	aagcgaaaat	tgtgtgcata	ctcatcgca	66924
actacgtctt	caacctcacg	ccacttgaca	agcgaacaaa	cttccggttcg	ttttggcttc	66984
cagttccaac	caaccgtaaa	atgaggcggt	actaaaaagt	tccgcgctgc	aggttccagt	67044
aatgctctag	tgtcaagatc	cctttgtcta	taaccctcaa	actggtgaaa	acgatccatt	67104
gcataattgg	aatgttctct	gtatgcacca	tcccgtaggc	caaaaaacgg	ggacatgtat	67164
attatatctc	ccgtggaaag	tccaaaacta	tcataaggga	atattgatct	ggcttcaact	67224
tcctcaatga	tgcaattcac	cgacgtgccc	gtcctatatg	ttccgggggt	tccggcaacc	67284
atgtacgtgt	cattggtagt	atgccatgct	ttggatccca	cagaattata	ttttgatgca	67344
attagaggca	tatcctgtgg	atttttatcc	tcattaaagg	cttcaacttt	gtggttattt	67404
cgtacgtacg	ttgctttaga	agaacacttg	ccaaacttat	caatgggtgc	cgtgatctct	67464
gaaacgggaa	ttggtaccct	atccgcatat	ctattagtaa	tttgcgtata	agaacttccg	67524
gcccacgccg	tgctaacgat	aacatctttg	taatataccg	tcgccttaaa	cttgtacgct	67584

gcaatgtttt	ctttataaac	aacagcaata	ccctctgtaa	agttttttacc	aaggtgataa	67644
tccggacatg	tccgagttgg	ttctaatacgt	acgattgtgg	agcctgttgg	cgggtgggcag	67704
acgtaaaacg	tgggtttttgt	ttcggcgtcc	tgggacttgt	gtatagcttc	tctgatttca	67764
tcaccatcgc	ccagatgagc	agaccgggtt	atatcttctg	attgtgtggg	ctctacttgt	67824
aaactctcat	aaaacgagct	tggagagacc	gacacaaccg	ccgtaacaaa	catagaaaat	67884
atgcataaaa	agcataacca	cacccccgta	acggagggtta	tgaaaacgcc	gggtccgttg	67944
aatccggagc	cagccgctgc	attaggggtgt	atagaagaga	aaaaacgtct	gaatcgtaga	68004
ttacgacggg	attctggctg	atccctgttt	ctccactttg	aataatagcc	acaaggggac	68064
atgtttcttc	gtacgttaaa	taaatgccgt	ctaagggtcc	gtgggaactg	cctatacctt	68124
taggttgaga	cgtgcacccg	cgtggatcct	tacctagacg	gtcaacgcga	cataaccgca	68184
cctccccaca	atggaaaaca	gaggtgaata	gtgtggttgc	aaacacaagc	tccctaatat	68244
atltccaggc	aagtctctgt	gcaaaagtaa	cgccttctac	cccagaaaag	caataaaaagc	68304
ccctaaatgg	actgagaagc	cagttggaac	caacgacacc	gcccataaac	tttgccaatt	68364
cctcttttta	gtgcggaaat	aggccaacgt	tttccacggg	aaaaaataag	gcggtgttag	68424
ggggttgtgc	aaaacgggtgt	tcatcgtgat	taaacaatgg	gccgttgacc	aactcaaaaa	68484
atltatgtgt	aagtgcagggt	aacatagccg	catctactgt	atgtcgaact	aaggtattcc	68544
ttataaatct	atgtgcatca	aaggccgctt	cctgaatgcg	attgtcgata	atacaccttg	68604
cctgggaaac	cttagctaaa	aacacgtttc	gtgccccaaa	cccattttgc	atcgaaacaa	68664
atgtctgcaa	taaggcctct	ccataaacgt	ttaccctgag	tgttttttct	agctcttggc	68724
gctgttcgcg	gatacatcta	ccgaggctgg	ttagagagcg	cttagacaga	tgttcaagat	68784
atactcgttt	tctttccgca	gcgtcaattt	ttgctttgga	taacagggtt	tcccatccat	68844
gaacagcaaa	agttatgcta	ctatcatcgt	tcagatcaca	ttcggatgct	gtagcgctgt	68904
cactcgcttc	tttggttaaa	tcatcctcac	acccaactct	ttctaaaagt	tggcgtaagg	68964
cggcttcggt	atcatgactc	gggttagaaa	tgtgacgcat	gagaggcgac	gatagatgat	69024
gggcataaca	ggctttaatt	aatgcttcta	tctgactgtc	tgggtgaggat	gagcgattgc	69084
caaccaaaat	actatcaatt	gcatccagag	atccgagttc	ttcagaaaac	gccctatcaa	69144
agtgtatggg	agttttttcca	aataacgcca	actcaaccgt	tacggctgta	agttctgcgt	69204
gtttttcatg	ttcgtttaat	acatccaaat	tatcaacaaa	cacgtctaaa	gtacgttggg	69264
gtccttcagt	ggaattagac	gttaaccaga	atttaagctc	gctgatggcg	tacatacacc	69324
gaggggcagg	tttaaaaaca	ttataagaat	caagcatggg	gctcgcaatt	tcgtatgttt	69384

gggtcaaacgt atcggttcttt gctcccatgg gattgactac cgtcttggtt tgaagtgttc	69444
gtaacgcttc aacggcggat tgacgtttga tatccggtac atcagggata tatggtaaac	69504
accgaataat atcgtcaaca tccacgttaa cccgaacttg cttagtaacg tgatcgcaga	69564
tacatcctaa taatctacga tgtaaggtct caccttggtt agctgttata cataattctt	69624
caaaacatat agcacatgga tgcgccggat caaacaactc cacgggtggt attagaccgc	69684
ttcctatagt atctgtcata aaccgcgtca cggtttccaa tgtgttttagc gcctcacgag	69744
aagacgtgat aatatagcag taattaagct gttttaaaaa attctcaatg tctgtgtaaaa	69804
actgaatttc actcgatacg taacctccgt atgttggttaa cgacagctca tgggtgatatt	69864
ggcagggtttt taagttaaac gctgagacaa agtaatcttt gatacagttt gagtcttttag	69924
tctcaccata aacaaaacgc gttttaaaat gttgtagcaa ctcaaacaaa cgctcacctt	69984
ctccctttac ataacataat gcccaatgca gtgcacaaac cgtgggagtg tttccaaatt	70044
ttagctgggt attaaatccc cggagaaaca gctttaataa ataacgaact gtcaaacagt	70104
tagccgctaa ccgatataaa aagcgacacg ccacccttgg atcacatcga cgtagcagtt	70164
caacctgaaa gatgtacgta taaacttgac ccagtagaac caacaatgtt cgattaatat	70224
ccaattccat gttatcgggc tgttactgtc cactggactg taagctgaat ggttggagac	70284
acactatatt acaggtcata tgggtaagga ctacacacaa aaaaagaaaa cacaacagaa	70344
tatgtaatat tgacttgttt attacgtaca ctaccccgcg tgtgggcttt aattggataa	70404
agagggaggt taaatcattt ccattgtaat gttcccatgt tttatgggaa taccactaag	70464
atcaaagagt tctcatctt cgggggggtcg ttttaagacca gggacagttg accctgaaat	70524
gtttgaccct gaaatgttta atacgttaga tgtggtgtca tggcttggtt cacaagaatc	70584
aaaattaaat gctaggtttg tgggggtttc cccatctccc gctgtcgttt tttcatctag	70644
aatctttact gcttctagag cgccttctac ggtccagggc gtttccaggg tttggataat	70704
ctggtcgtgt aactcctcca agtctctggc taaaaactca tctgtctgtaa gacttaacca	70764
gtcgtcaaata gccatatgtt gtgctcgagc gccactgca cgcacaaccg tggcgtatat	70824
ggctaattga accatggccc cgccactgac aattataccg cgaacttggt cggatagggt	70884
ggtttctcga tttcccgacg agggacctgt tacggggcag ataaaacctc ctctaggaca	70944
tgctattata aaacggcgag tgcgatcaaa tgtaaatagc gggcatacat ttttaccccc	71004
gtttaaacgc ctccaattcc ctgcctgaaa gacgcggttg tttcctgccg ctccgtgata	71064
tttactaatg cttattccta aaacgaccat gggacgttga ttcattggccg cgcggaactaa	71124
atgagttgaa gtaaaagccg tagtccataa ttccggtaag ttttccgttt tttcaagaag	71184

cgccttttgc	tgggttttcta	tgtccgcggc	ggacgtgaca	tcttttacgaa	tccaatgcaa	71244
aacggatgat	gggtcacgcg	ggcgcctggc	acccgtaatt	atagaagtta	aggtatttat	71304
aaggtactgt	gaatgatcgc	agtatttaag	aataagattt	gccatataaa	actgggctaa	71364
ttctcctatg	caggttgggg	gtagattaat	aaagtttatt	gctgcatatt	cctcggtaaa	71424
ccgtttaaca	gctgcaatag	tggtaatctc	ttcgtgtgta	agtttatctg	ccggcatctg	71484
gttgcgttgt	aacaggggcc	aaaaccactg	cgggttgggg	gatttactgt	ttgggtggcat	71544
accccgagga	aataacaggc	cgtgaaactg	tttaagcaaa	aaccctaggg	ccccgtgtaa	71604
catatccact	cttttttctt	ggcgttggta	cgcacttgca	aggcctacaa	gccttgcccc	71664
ggctgcctca	gagagatttg	tacagttacc	tgaaaaaacg	accctatttt	taactcgtat	71724
atcccgaata	acttccacgc	ttacgcgcgc	taaatcccca	tcaaagggtac	gccccgcggg	71784
cgcgtcttgt	cccaatgtcg	gatttggggc	ggatacagga	ccttcagata	atgttacggg	71844
tatagagcgt	gttgatataa	acccccatt	aaacagggtca	acaaaacgcc	gccgcaaaac	71904
aggttggaat	tggttacgaa	agttccgccc	ctcaacttgc	tgtccgtaaa	atacacaatg	71964
acattggcct	aatgctaagt	cttgtaccac	ggctagggtgt	gttcgtttta	ctaaaaaatt	72024
ggtaatggga	caaatgctc	ctgagtatgg	atcaaacggt	aacgccattg	aatgggtggc	72084
ttcggataat	ccttcacgga	tcttataatc	gcgggtctca	accaacactt	tcataaattg	72144
tgttgttgtc	tgttctatac	gcgcacgcag	tgtgtctaata	atgcgacgaa	acgttggatg	72204
atccacaatg	acagacgata	gtccctcgga	agaacatggg	gcaccgcgat	ccagtagtcg	72264
ctcttgttct	agatcgataa	acaagcggtc	tagtgtagcc	ctataagtgt	cctgcatggg	72324
tgcctttgct	gcttccggtt	gatccccggg	ttttcgaagg	attaaatatg	gagcatagtt	72384
tcctagagga	tcgcagtcgc	tatattggct	gttcattggt	ccaaacaccc	caatagggtg	72444
acgggtggct	tgtccaaatc	gcggcatgcg	ttgtctaagt	cgggtgtactg	ttgtgtgagc	72504
gcataccggc	cgcgtgtggt	tttcacataa	actacatgga	atttcagagt	caaagggtccc	72564
cgtaacatat	tttaacgcat	ccccgtgacc	ccctgtaaac	gcaccagcgt	cacagcggtc	72624
tagataaaaa	agcagtcgcg	ccaacagggg	tgctccaaat	ccacaaatga	gtgccaaata	72684
atccacgcta	aactctgtgt	ttgatgaacc	cgtagactga	ctggatagaa	cgtggccatc	72744
tcgatctggt	tggggattcg	cagctaaatg	agggtccggca	aactggtaaa	atcgattaaa	72804
tgatggaccc	ggtcccccat	ccttggcttc	ggcatcccg	ctatcctcca	cctcagttag	72864
atacaacgca	gaatttgggc	tgaaaaccat	cgcaccaatg	accccggccca	cacgagcggt	72924
atatgacccc	agagcgttta	gccttggcaa	agtgccctcc	atgcctataa	acattggcca	72984

ttctttgata tctgttggag tttcttcgta aattccagtg ttgaatataa cttctgcgtg	73044
caaggctgtg tcagcggcca taatagacgc caaccgtctt tcaaaccccc ccgatgggct	73104
aggcttagac gtggagttga catcgtttcg acgcgctcca cgggcggtag tggttccact	73164
tgaagaggac tgaaaatacg tgtacgtaat gtcagggggg agtactgccc cctcgtgatt	73224
ttcatcaaaa gcaagggtggg ccgctcctcg ggcgacggca gttacatttc tgacgcgcaa	73284
ggcaacggcc atgggagcaa taacacagtc atgtattaaa tggcacaacc cgggtgttata	73344
aaagggtggt ggggtatacaa aaccctctcc gatagacctg tgatgagtgt tgaatgggtc	73404
gggtaccaga cggttaacat cgggcatgaa aagttgtacc ggaaataacg gtatacgtat	73464
aacatcccca tggttaatat gaacaatatc gagtcctcca taatgcagaa acacgttgca	73524
cataaatacg gcttccttaa acaatgccgt gaccaccaag tataatattg tattttctgg	73584
ctctaateca aggcgggtgc atatctcagc gccggtcgtc tcaacagcac cgtcaacagg	73644
aggcccttgg cagcgtgaaa acccaaaccg ttctcgagcc gcgttacacg cgcgtgtgag	73704
atttggggcc gcggagctgg gtaaaacgtg tttgcctccg tgaaagacaa agacagatgg	73764
atagaaatga ctggtagtga gttttaaggt aataccagct ccggcaagac ccgtagtgcg	73824
tgctccagaa accaccgcca ggctggatgt aaaagttttt tccacgggtca aattacgcat	73884
caaaggtaat aaagccaaat cagagtccgt gctacgagcg gccaaaaatg aaatttcctc	73944
cagatccaaa tcttcaaccc ggcacgcata aacgtaaccc aggggccccg tgggcactgt	74004
cacagtcttc tgagtatttt ccatttttggg gaagtactcg taataatggg gggttgttgg	74064
cagggtcaaa tgaccacca aaacccagtc tgtcgataca ttaagaagag aggcttttaa	74124
acgggtatta catatgcgga aaccacaaca aatcacgtga ttacacttta tgtattagaa	74184
gggcgtgggg ttgtgttact cagtaacact ggcttttttac aagattatca atcgттааа	74244
taaa atg gcg atc aga acg ggg ttt tgt aat ccc ttt tta acc caa	74290
Met Ala Ile Arg Thr Gly Phe Cys Asn Pro Phe Leu Thr Gln	
5030 5035 5040	
gca tca ggg att aaa tat aac cca aga acc ggg cgc ggt agt aac	74335
Ala Ser Gly Ile Lys Tyr Asn Pro Arg Thr Gly Arg Gly Ser Asn	
5045 5050 5055	
aga gaa ttt ctt cat agt tac aaa act acc atg tca tcg ttt caa	74380
Arg Glu Phe Leu His Ser Tyr Lys Thr Thr Met Ser Ser Phe Gln	
5060 5065 5070	
ttt ttg gcc cct aaa tgt tta gat gaa gat gtg ccc atg gaa gaa	74425
Phe Leu Ala Pro Lys Cys Leu Asp Glu Asp Val Pro Met Glu Glu	
5075 5080 5085	
cga aag ggg gtt cac gtc ggt aca ctt agt cga ccg cct aaa gtt	74470
Arg Lys Gly Val His Val Gly Thr Leu Ser Arg Pro Pro Lys Val	

5090				5095				5100							
tac	tgt	aat	gga	aaa	gaa	gtt	ccg	att	ctg	gat	ttt	cgt	tgt	tcc	74515
Tyr	Cys	Asn	Gly	Lys	Glu	Val	Pro	Ile	Leu	Asp	Phe	Arg	Cys	Ser	
			5105											5115	
agc	ccc	tgg	cct	aga	cgc	gtg	aat	att	tgg	ggg	gaa	atc	gac	ttt	74560
Ser	Pro	Trp	Pro	Arg	Arg	Val	Asn	Ile	Trp	Gly	Glu	Ile	Asp	Phe	
			5120											5130	
cgt	ggg	gat	aag	ttt	gac	ccc	cgc	ttt	aac	aca	ttc	cat	gta	tat	74605
Arg	Gly	Asp	Lys	Phe	Asp	Pro	Arg	Phe	Asn	Thr	Phe	His	Val	Tyr	
			5135											5145	
gat	att	gtc	gaa	aca	aca	gaa	gcc	gcg	tct	aat	gga	gat	gta	tcc	74650
Asp	Ile	Val	Glu	Thr	Thr	Glu	Ala	Ala	Ser	Asn	Gly	Asp	Val	Ser	
			5150											5160	
cgg	ttt	gca	act	gca	aca	cga	ccg	ctt	ggt	acc	gtt	att	act	tta	74695
Arg	Phe	Ala	Thr	Ala	Thr	Arg	Pro	Leu	Gly	Thr	Val	Ile	Thr	Leu	
			5165											5175	
ctt	ggc	atg	tcc	cga	tgt	gga	aaa	agg	gtg	gca	gtt	cat	gta	tac	74740
Leu	Gly	Met	Ser	Arg	Cys	Gly	Lys	Arg	Val	Ala	Val	His	Val	Tyr	
			5180											5190	
ggc	atc	tgt	caa	tat	ttt	tat	ata	aac	aaa	gcc	gag	gtg	gat	acc	74785
Gly	Ile	Cys	Gln	Tyr	Phe	Tyr	Ile	Asn	Lys	Ala	Glu	Val	Asp	Thr	
			5195											5205	
gct	tgt	ggc	ata	cgt	tcc	ggt	agc	gag	tta	tct	gta	tta	ctt	gcc	74830
Ala	Cys	Gly	Ile	Arg	Ser	Gly	Ser	Glu	Leu	Ser	Val	Leu	Leu	Ala	
			5210											5220	
gag	tgt	tta	cgc	agt	tct	atg	ata	aca	caa	aat	gat	gca	acg	tta	74875
Glu	Cys	Leu	Arg	Ser	Ser	Met	Ile	Thr	Gln	Asn	Asp	Ala	Thr	Leu	
			5225											5235	
aat	gga	gac	aag	aac	gct	ttt	cat	ggt	acc	tcg	ttt	aaa	agc	gca	74920
Asn	Gly	Asp	Lys	Asn	Ala	Phe	His	Gly	Thr	Ser	Phe	Lys	Ser	Ala	
			5240											5250	
tct	cca	gaa	agc	ttt	cgc	gtt	gag	gtt	att	gag	cgc	aca	gat	gtt	74965
Ser	Pro	Glu	Ser	Phe	Arg	Val	Glu	Val	Ile	Glu	Arg	Thr	Asp	Val	
			5255											5265	
tat	tac	tac	gat	aca	cag	cca	tgt	gcg	ttt	tac	agg	gtg	tat	tct	75010
Tyr	Tyr	Tyr	Asp	Thr	Gln	Pro	Cys	Ala	Phe	Tyr	Arg	Val	Tyr	Ser	
			5270											5280	
ccc	tca	tct	aaa	ttt	aca	aat	tat	ctt	tgt	gat	aac	ttt	cac	ccg	75055
Pro	Ser	Ser	Lys	Phe	Thr	Asn	Tyr	Leu	Cys	Asp	Asn	Phe	His	Pro	
			5285											5295	
gag	ttg	aaa	aag	tat	gaa	ggt	cgg	gta	gac	gct	acc	act	cgt	ttt	75100
Glu	Leu	Lys	Lys	Tyr	Glu	Gly	Arg	Val	Asp	Ala	Thr	Thr	Arg	Phe	
			5300											5310	
cta	atg	gat	aat	ccc	ggc	ttt	gtt	agt	ttt	ggt	tgg	tat	caa	cta	75145
Leu	Met	Asp	Asn	Pro	Gly	Phe	Val	Ser	Phe	Gly	Trp	Tyr	Gln	Leu	

5315				5320				5325				
aaa cct gga gtt gat ggg gaa cgt gtt cga gtt cga ccg gca agt	Lys Pro Gly Val Asp Gly Glu Arg Val Arg Val Arg Pro Ala Ser	5330	5335	5340	75190							
cgc caa tta acg tta agc gac gtt gaa att gac tgc atg tcg gat	Arg Gln Leu Thr Leu Ser Asp Val Glu Ile Asp Cys Met Ser Asp	5345	5350	5355	75235							
aat ctg cag gct ata cca aac gat gac tca tgg cct gac tac aag	Asn Leu Gln Ala Ile Pro Asn Asp Asp Ser Trp Pro Asp Tyr Lys	5360	5365	5370	75280							
ttg tta tgt ttc gat att gaa tgt aaa tca gga gga tct aat gag	Leu Leu Cys Phe Asp Ile Glu Cys Lys Ser Gly Gly Ser Asn Glu	5375	5380	5385	75325							
ctg gcg ttt ccc gat gca aca cat ctg gag gat ctt gta atc caa	Leu Ala Phe Pro Asp Ala Thr His Leu Glu Asp Leu Val Ile Gln	5390	5395	5400	75370							
att tct tgt cta tta tat tca atc cct cga cag tct tta gaa cac	Ile Ser Cys Leu Leu Tyr Ser Ile Pro Arg Gln Ser Leu Glu His	5405	5410	5415	75415							
att tta ctg ttt tcc ctt ggc tct tgt gac tta cca caa agg tat	Ile Leu Leu Phe Ser Leu Gly Ser Cys Asp Leu Pro Gln Arg Tyr	5420	5425	5430	75460							
gta caa gaa atg aag gac gcg ggg tta ccg gag ccg act gtg ctg	Val Gln Glu Met Lys Asp Ala Gly Leu Pro Glu Pro Thr Val Leu	5435	5440	5445	75505							
gag ttt gat agt gaa ttc gag cta tta att gca ttt atg acc ctc	Glu Phe Asp Ser Glu Phe Glu Leu Leu Ile Ala Phe Met Thr Leu	5450	5455	5460	75550							
gta aaa cag tac gct ccc gag ttt gcc aca ggt tat aac att gtt	Val Lys Gln Tyr Ala Pro Glu Phe Ala Thr Gly Tyr Asn Ile Val	5465	5470	5475	75595							
aat ttt gat tgg gcg ttt att atg gag aaa ctt aat tct ata tac	Asn Phe Asp Trp Ala Phe Ile Met Glu Lys Leu Asn Ser Ile Tyr	5480	5485	5490	75640							
agt ctc aag ctt gat ggt tat ggc agt ata aac cgt ggg ggt ctg	Ser Leu Lys Leu Asp Gly Tyr Gly Ser Ile Asn Arg Gly Gly Leu	5495	5500	5505	75685							
ttt aag ata tgg gat gtt ggc aaa tcc gga ttt cag cga cga agc	Phe Lys Ile Trp Asp Val Gly Lys Ser Gly Phe Gln Arg Arg Ser	5510	5515	5520	75730							
aag gta aag atc aac ggt ctc ata tct ctg gat atg tat gca att	Lys Val Lys Ile Asn Gly Leu Ile Ser Leu Asp Met Tyr Ala Ile	5525	5530	5535	75775							
gca act gaa aaa tta aaa ctc tcg agt tat aaa tta gat tcg gtt	Ala Thr Glu Lys Leu Lys Leu Ser Ser Tyr Lys Leu Asp Ser Val				75820							

5540	5545	5550	
gca cgt gaa gct cta aat gag tcc aag aga gat ttg ccc tac aaa			75865
Ala Arg Glu Ala Leu Asn Glu Ser Lys Arg Asp Leu Pro Tyr Lys			
5555	5560	5565	
gac att ccg gga tat tac gct agt gga ccg aat aca cga gga att			75910
Asp Ile Pro Gly Tyr Tyr Ala Ser Gly Pro Asn Thr Arg Gly Ile			
5570	5575	5580	
att ggt gaa tat tgt ata caa gac tcg gct ctt gtg ggg aaa ctg			75955
Ile Gly Glu Tyr Cys Ile Gln Asp Ser Ala Leu Val Gly Lys Leu			
5585	5590	5595	
ttt ttt aaa tat tta cca cac ctt gag tta tcc gcg gtt gca agg			76000
Phe Phe Lys Tyr Leu Pro His Leu Glu Leu Ser Ala Val Ala Arg			
5600	5605	5610	
cta gct aga att act tta acc aag gct att tac gac gga cag cag			76045
Leu Ala Arg Ile Thr Leu Thr Lys Ala Ile Tyr Asp Gly Gln Gln			
5615	5620	5625	
gtt agg att tac acc tgt tta tta gga ctg gct tcg tct cga gga			76090
Val Arg Ile Tyr Thr Cys Leu Leu Gly Leu Ala Ser Ser Arg Gly			
5630	5635	5640	
ttt att tta ccc gat ggg gga tac cca gct act ttt gaa tat aag			76135
Phe Ile Leu Pro Asp Gly Gly Tyr Pro Ala Thr Phe Glu Tyr Lys			
5645	5650	5655	
gat gtt att ccc gat gtc ggg gat gtt gag gaa gag atg gat gaa			76180
Asp Val Ile Pro Asp Val Gly Asp Val Glu Glu Glu Met Asp Glu			
5660	5665	5670	
gac gag agc gtt tct ccc act ggt acg tca agt ggg cga aat gta			76225
Asp Glu Ser Val Ser Pro Thr Gly Thr Ser Ser Gly Arg Asn Val			
5675	5680	5685	
gga tat aaa gga gcc agg gtt ttt gac cct gat acg gga ttt tat			76270
Gly Tyr Lys Gly Ala Arg Val Phe Asp Pro Asp Thr Gly Phe Tyr			
5690	5695	5700	
atc gat ccg gtg gtc gta ttg gat ttt gca agt tta tat cca agt			76315
Ile Asp Pro Val Val Val Leu Asp Phe Ala Ser Leu Tyr Pro Ser			
5705	5710	5715	
ata att cag gcc cat aac tta tgt ttt acc acg cta acg tta aat			76360
Ile Ile Gln Ala His Asn Leu Cys Phe Thr Thr Leu Thr Leu Asn			
5720	5725	5730	
ttt gag acg gtt aaa cgt ttg aat cca tcc gat tat gcc acc ttt			76405
Phe Glu Thr Val Lys Arg Leu Asn Pro Ser Asp Tyr Ala Thr Phe			
5735	5740	5745	
aca gtt gga gga aaa cgt ctt ttt ttt gtg cgc tct aac gtt cga			76450
Thr Val Gly Gly Lys Arg Leu Phe Phe Val Arg Ser Asn Val Arg			
5750	5755	5760	
gaa agt ctg ctg ggt gtt ctt tta aaa gac tgg ttg gct atg cgc			76495
Glu Ser Leu Leu Gly Val Leu Leu Lys Asp Trp Leu Ala Met Arg			

5765				5770				5775				
aag gct att aga	gcg cgc ata ccc	gga agt tct tca	gat gaa gca	76540								
Lys Ala Ile Arg	Ala Arg Ile Pro	Gly Ser Ser Ser	Asp Glu Ala									
5780	5785	5790										
gtg tta tta gac	aaa caa caa gcc	gcg ata aaa gta	ggt tgt aat	76585								
Val Leu Leu Asp	Lys Gln Gln Ala	Ala Ile Lys Val	Val Cys Asn									
5795	5800	5805										
tcc gtg tac ggt	ttt act gga gtt	gcg cag gga ttt	ctg cca tgt	76630								
Ser Val Tyr Gly	Phe Thr Gly Val	Ala Gln Gly Phe	Leu Pro Cys									
5810	5815	5820										
tta tac gta gcg	gcc act gtc act	aca att ggc cgt	caa atg tta	76675								
Leu Tyr Val Ala	Ala Thr Val Thr	Thr Ile Gly Arg	Gln Met Leu									
5825	5830	5835										
tta agt acc aga	gat tat att cat	aat aac tgg gcc	gca ttt gaa	76720								
Leu Ser Thr Arg	Asp Tyr Ile His	Asn Asn Trp Ala	Ala Phe Glu									
5840	5845	5850										
cgt ttt att aca	gcg ttt cca gac	att gaa agt agc	ggt ctc tcc	76765								
Arg Phe Ile Thr	Ala Phe Pro Asp	Ile Glu Ser Ser	Val Leu Ser									
5855	5860	5865										
caa aaa gcg tac	gag gta aag gtt	ata tat gga gat	acg gat tct	76810								
Gln Lys Ala Tyr	Glu Val Lys Val	Ile Tyr Gly Asp	Thr Asp Ser									
5870	5875	5880										
gtg ttt atc cga	ttc aag ggt gtt	agt gtt gag ggg	ata gct aaa	76855								
Val Phe Ile Arg	Phe Lys Gly Val	Ser Val Glu Gly	Ile Ala Lys									
5885	5890	5895										
atc ggc gag aaa	atg gca cat ata	att tca acg gct	ctg ttt tgt	76900								
Ile Gly Glu Lys	Met Ala His Ile	Ile Ser Thr Ala	Leu Phe Cys									
5900	5905	5910										
cct cct ata aag	ttg gag tgt gaa	aaa act ttt ata	aaa ctt ttg	76945								
Pro Pro Ile Lys	Leu Glu Cys Glu	Lys Thr Phe Ile	Lys Leu Leu									
5915	5920	5925										
ctt ata aca aag	aaa aag tac att	ggg gta att tac	ggc gga aag	76990								
Leu Ile Thr Lys	Lys Lys Tyr Ile	Gly Val Ile Tyr	Gly Gly Lys									
5930	5935	5940										
gtt tta atg aag	gga gtc gac ttg	gtt aga aaa aac	aac tgt caa	77035								
Val Leu Met Lys	Gly Val Asp Leu	Val Arg Lys Asn	Asn Cys Gln									
5945	5950	5955										
ttt att aac gat	tat gcc cgc aaa	ctt gta gaa ctg	ttg tta tat	77080								
Phe Ile Asn Asp	Tyr Ala Arg Lys	Leu Val Glu Leu	Leu Leu Tyr									
5960	5965	5970										
gac gac acc gtc	tcg cgt gct gcg	gcg gag gcg tcg	tgt gtt tcc	77125								
Asp Asp Thr Val	Ser Arg Ala Ala	Ala Glu Ala Ser	Cys Val Ser									
5975	5980	5985										
att gct gaa tgg	aat aga cgg gcc	atg ccg tct ggg	atg gcc ggg	77170								
Ile Ala Glu Trp	Asn Arg Arg Ala	Met Pro Ser Gly	Met Ala Gly									

5990				5995				6000				
ttt gga cgc ata att gca gat gca cat cgc cag att aca tca ccc	Phe Gly Arg Ile Ile Ala Asp Ala His Arg Gln Ile Thr Ser Pro	6005	6010	6015	77215							
aaa ttg gat att aat aag ttt gtt atg acg gcc gag ctt agt cgt	Lys Leu Asp Ile Asn Lys Phe Val Met Thr Ala Glu Leu Ser Arg	6020	6025	6030	77260							
cca cca tcc gcc tac ata aac cgt cgc ttg gct cac tta aca gta	Pro Pro Ser Ala Tyr Ile Asn Arg Arg Leu Ala His Leu Thr Val	6035	6040	6045	77305							
tat tat aaa tta gta atg aga cag ggt caa atc cca aac gtt cga	Tyr Tyr Lys Leu Val Met Arg Gln Gly Gln Ile Pro Asn Val Arg	6050	6055	6060	77350							
gaa cgc atc cct tat gtt att gtg gcc ccc aca gac gaa gtg gag	Glu Arg Ile Pro Tyr Val Ile Val Ala Pro Thr Asp Glu Val Glu	6065	6070	6075	77395							
gct gat gca aaa agt gta gct ttg cta cgt gga gat cct tta cag	Ala Asp Ala Lys Ser Val Ala Leu Leu Arg Gly Asp Pro Leu Gln	6080	6085	6090	77440							
aat acc gca ggt aaa cgg tgt ggg gaa gca aag cgt aag tta ata	Asn Thr Ala Gly Lys Arg Cys Gly Glu Ala Lys Arg Lys Leu Ile	6095	6100	6105	77485							
ata tct gac tta gcg gaa gat ccc att cac gta aca tca cac ggg	Ile Ser Asp Leu Ala Glu Asp Pro Ile His Val Thr Ser His Gly	6110	6115	6120	77530							
ctg tct tta aac att gac tat tat ttt tct cat ctc att ggg acg	Leu Ser Leu Asn Ile Asp Tyr Tyr Phe Ser His Leu Ile Gly Thr	6125	6130	6135	77575							
gcg agt gta act ttt aag gcg tta ttt gga aac gac act aaa ctc	Ala Ser Val Thr Phe Lys Ala Leu Phe Gly Asn Asp Thr Lys Leu	6140	6145	6150	77620							
aca gaa cgg ctt tta aaa cgt ttt att cca gag aca cga gtt gtt	Thr Glu Arg Leu Leu Lys Arg Phe Ile Pro Glu Thr Arg Val Val	6155	6160	6165	77665							
aac gtt aaa atg cta aac cgc ttg cag gcg gca ggc ttt gtt tgt	Asn Val Lys Met Leu Asn Arg Leu Gln Ala Ala Gly Phe Val Cys	6170	6175	6180	77710							
ata cac gcc ccg tgc tgg gat aat aaa atg aac act gaa gct gaa	Ile His Ala Pro Cys Trp Asp Asn Lys Met Asn Thr Glu Ala Glu	6185	6190	6195	77755							
atc acc gag gag gaa caa agt cat caa ata atg cgt aga gtc ttt	Ile Thr Glu Glu Glu Gln Ser His Gln Ile Met Arg Arg Val Phe	6200	6205	6210	77800							
tgt att cca aaa gca att ctc cat caa agt taa gggtcacacat	Cys Ile Pro Lys Ala Ile Leu His Gln Ser				77843							

6215

6220

tttacagtaa	acgtccgatg	ttccaatgga	tggcaccaca	gtctctgttt	gttgttctgg	77903
gttgcgacat	accgacagta	aaaatgttgt	ctgccaaacg	tgtgcgacta	ttttataccc	77963
ccgacacgcg	gcctgtatat	gatcgattag	tctgtaatgg	aggtgaacag	atttccccgg	78023
aaatataaca	tacatcataa	accctccggc	atctccatca	cgataaaaaa	gtacgcgtat	78083
atctcgcatg	ccccctccc	tcataatatg	atacataaaa	aataattccg	gttggtgcaa	78143
tacgctcgac	aatagggggt	cagcggacgc	tgcttgcatg	ttggctcggg	ctgatagcgc	78203
caaaatggat	gcaagaaaca	cacgatattc	gtatatgttg	ttaagctgct	gaacatatgc	78263
tagtatcaga	gccgcccgat	cggttcgaca	tagacgcggg	tctccagatg	cagtgcattg	78323
cggacaataa	cctccgagac	ctaaatgata	acccattccg	gataacgaca	ggcagttatc	78383
cgccactgtc	tgacccaagt	taaacggaag	ggtgacaggg	gtcgtcttaa	taattggcac	78443
gattaagcct	ctaacggtag	ctagttcttc	tggggggggac	cttgcgatgt	aattaaaata	78503
atggcggtac	acagaccgct	cctttgacat	aagttttcct	cgaatgggtt	gacggcggca	78563
tggcgttctg	gagcgtaac	gcatcgaagg	cccgtccga	gatacggatt	tatatgcct	78623
agacatactt	cgatagggtg	tgttcgaggg	agaccagcga	tattgcatgt	cgtcgaagca	78683
taagtcctcc	atctcgatatg	aatgcggcat	tggcggttgg	tttgcgtgga	aaaatctggt	78743
aggctttaaa	tgcatacgcc	aatgtccaca	ggccagcaca	tacacgacct	tcaaactctgt	78803
tttgtgcagc	cagttgggct	ttatataact	ccaacacttc	cttatccgcg	gttgtaggat	78863
gggcaaataa	aatttttaggg	tttgtctgta	attccgagag	agcgcatagg	agatcgcaaa	78923
ataaatgttt	atatacggcc	tcggaacctg	ctgcttttac	aatggttatg	aatcgaccct	78983
catcattaaa	tggaaattta	agtttaaatgg	ggttatctag	gctccatgca	ttgattacag	79043
gttcgataca	gtcaaataaa	cttgtgttat	ttgctgagta	tgctaataata	tcccttttaa	79103
actgccgcaa	agcgatccaa	tagtgcccta	tggttaataa	acaacataac	atgcattcgg	79163
tattcgtgcg	accacggcac	tttgcgtttt	ttaaggtagt	taacaaaata	ggcccaaagt	79223
ctacttcggg	acaggcatcc	tcgctcgtaa	at ttggaaaa	ttgttttgga	acgtccctgg	79283
agttttcaat	ccggttcgcc	tgccagtatg	atttaacaca	tccaacgcga	gtttctatag	79343
cacaatttgt	acgctcgtct	acattccaag	tagcaacccc	actcagtaat	aataaagcca	79403
agtctgcgta	acccaagct	gcttctacgt	aagacgattt	tttaagtttg	tctattaata	79463
tatcttcaaa	ctctatatcc	tcttttaagt	cacgttccgc	gcaggtaatc	atcccacttg	79523
tgcgatgttc	cgatgatgaa	cagtcaacca	tccgcgcgca	atctttccaa	ttagccaagg	79583

cggccgctaa aggttgaggg cctccagtca gtccgtcctg attaaagtaa aatgacttac	79643
gcgtttcggg ttcgtctaaa cgagacgtgc tgatcgatag taatgcagcc ctaactaccg	79703
cctgtacaaa aaaggagtaa ttggaatata ttactttggt ggccatttcc ttaccggggg	79763
gcggtcgtat acctggtaac cctccatcgg tacgaaaaca tacatgcaaa aaaaaatgtc	79823
tttgtatata taacagggaa agcgtgcgcc tggcaaagga cccaaccaa gtaacgttat	79883
aacggcacag gtagtaacga tccataagat acacaaattc aaaggcagcg ctaaaagtga	79943
caactgcaca gggcggggat gccagacttt tcatacataa catggcgtag tccgcaaccc	80003
attccggtgt cagtccaaat ttacgtttat acaaatcaag cgttctgcag accaaacagg	80063
ctctgtctaa cgccaaaacg tctccaattt cttctataaa ttcagtggta cttgaggtca	80123
tttcattata cacacctacc gccgaagagg cctcataagt gacgttgttt tctattgcac	80183
ggggaacatt tattaagtgg gaggcaaata acaattctga aaataacaaa tcgtttttta	80243
gcagaagggc tggattataa gcg atg tac gaa tcg gaa aat gcg tcg gaa	80293
Met Tyr Glu Ser Glu Asn Ala Ser Glu	
6225 6230	
cac cat ccg gaa tta gaa gat gta ttt tcg gag aat acg ggc gat	80338
His His Pro Glu Leu Glu Asp Val Phe Ser Glu Asn Thr Gly Asp	
6235 6240 6245	
tcg aat cca tcc atg ggt tct tct gat tct acc cga tcc atc tct	80383
Ser Asn Pro Ser Met Gly Ser Ser Asp Ser Thr Arg Ser Ile Ser	
6250 6255 6260	
ggg atg agg gcc cgc gat tta att aca gac acc gat gtt aat cta	80428
Gly Met Arg Ala Arg Asp Leu Ile Thr Asp Thr Asp Val Asn Leu	
6265 6270 6275	
tta aat atc gat gca ctg gag tca aag tat ttt cct gct gat agc	80473
Leu Asn Ile Asp Ala Leu Glu Ser Lys Tyr Phe Pro Ala Asp Ser	
6280 6285 6290	
acc ttt act ctt tcc gtt tgg ttt gaa aat tta att ccc ccg gaa	80518
Thr Phe Thr Leu Ser Val Trp Phe Glu Asn Leu Ile Pro Pro Glu	
6295 6300 6305	
ata gaa gca att cta cct aca act gac gct caa tta aat tat ata	80563
Ile Glu Ala Ile Leu Pro Thr Thr Asp Ala Gln Leu Asn Tyr Ile	
6310 6315 6320	
tca ttt acc agt cgc ctg gcg tcc gtt tta aaa cat aaa gaa agt	80608
Ser Phe Thr Ser Arg Leu Ala Ser Val Leu Lys His Lys Glu Ser	
6325 6330 6335	
aac gat tca gaa aaa tct gct tat gtt gtt cca tgt gaa cat agt	80653
Asn Asp Ser Glu Lys Ser Ala Tyr Val Val Pro Cys Glu His Ser	
6340 6345 6350	
gcc agc gtg acc cgt cgc cgt gaa cgc ttt gcg gga gtc atg gcc	80698
Ala Ser Val Thr Arg Arg Arg Glu Arg Phe Ala Gly Val Met Ala	

6355	6360	6365	
aaa ttt cta gat ttg cat gaa ata ttg aag gat gct taa tacatgggga			80747
Lys Phe Leu Asp Leu His Glu Ile Leu Lys Asp Ala			
6370	6375		
aaataaacgc attaataagt cgtcagggggg tggatcactc caaactcctc ctatatccca			80807
cgataaatgg tctaaatact tcacgcgtgt gccttggttt gcaaccttag atcaat atg			80866
		Met	
tca cgg aga acg tat gta cgg agt gaa cgc agg agg ggt tgc gga			80911
Ser Arg Arg Thr Tyr Val Arg Ser Glu Arg Arg Arg Gly Cys Gly			
6380	6385	6390	
gat aat ctt tta caa cgt att cgg ttg gtg gta cca agc gct ctt			80956
Asp Asn Leu Leu Gln Arg Ile Arg Leu Val Val Pro Ser Ala Leu			
6395	6400	6405	
caa tgt tgc gat ggg gat ctt cca ata ttt gat cca caa cgc ccc			81001
Gln Cys Cys Asp Gly Asp Leu Pro Ile Phe Asp Pro Gln Arg Pro			
6410	6415	6420	
ccc gcc cgt tgt gtt ttt cag ttt aac ggc gaa gac aac gta tcc			81046
Pro Ala Arg Cys Val Phe Gln Phe Asn Gly Glu Asp Asn Val Ser			
6425	6430	6435	
gaa gcc ttt ccg gta gag tat att atg cgt tta atg gcg aat tgg			81091
Glu Ala Phe Pro Val Glu Tyr Ile Met Arg Leu Met Ala Asn Trp			
6440	6445	6450	
gcg caa gta gat tgt gac cct tac ata aaa att caa aat acg ggg			81136
Ala Gln Val Asp Cys Asp Pro Tyr Ile Lys Ile Gln Asn Thr Gly			
6455	6460	6465	
gtg tct gtg cta ttt caa ggt ttt ttt ttt cgt ccg act aac gca			81181
Val Ser Val Leu Phe Gln Gly Phe Phe Phe Arg Pro Thr Asn Ala			
6470	6475	6480	
cca gtg gct gaa gtg tcc att gac agt aat aac gtg att ctt agt			81226
Pro Val Ala Glu Val Ser Ile Asp Ser Asn Asn Val Ile Leu Ser			
6485	6490	6495	
tca acg tta agt acc ggt atc aac cta tct gct ttg gaa tca att			81271
Ser Thr Leu Ser Thr Gly Ile Asn Leu Ser Ala Leu Glu Ser Ile			
6500	6505	6510	
aaa cga ggt ggg ggt att gac cgc cga cct ctc cag gct tta atg			81316
Lys Arg Gly Gly Gly Ile Asp Arg Arg Pro Leu Gln Ala Leu Met			
6515	6520	6525	
tgg gtg aac tgc ttt gtg cga atg cca tat gtt cag tta tcc ttt			81361
Trp Val Asn Cys Phe Val Arg Met Pro Tyr Val Gln Leu Ser Phe			
6530	6535	6540	
cgt ttt atg gga ccg gaa gat cca tct cgc acc att aaa ctt atg			81406
Arg Phe Met Gly Pro Glu Asp Pro Ser Arg Thr Ile Lys Leu Met			
6545	6550	6555	

gcc cgc gcc acg gat gca tac atg tat aag gaa act ggc aat aat	81451
Ala Arg Ala Thr Asp Ala Tyr Met Tyr Lys Glu Thr Gly Asn Asn	
6560 6565 6570	
ttg gat gaa tat ata cgc tgg cgg cct tca ttc aga tcc cca ccc	81496
Leu Asp Glu Tyr Ile Arg Trp Arg Pro Ser Phe Arg Ser Pro Pro	
6575 6580 6585	
gag aac gga agt cca aac acg tct gtt caa atg caa agt gac att	81541
Glu Asn Gly Ser Pro Asn Thr Ser Val Gln Met Gln Ser Asp Ile	
6590 6595 6600	
aaa cct gcg tta ccc gat acc caa act acg cgt gtc tgg aaa ctt	81586
Lys Pro Ala Leu Pro Asp Thr Gln Thr Thr Arg Val Trp Lys Leu	
6605 6610 6615	
gct cta ccc gta gct aac gtg aca tat gcc ctg ttc att gta att	81631
Ala Leu Pro Val Ala Asn Val Thr Tyr Ala Leu Phe Ile Val Ile	
6620 6625 6630	
gta ctg gta gtt gta tta ggg gcg gtg ctt ttc tgg aaa taa	81673
Val Leu Val Val Val Leu Gly Ala Val Leu Phe Trp Lys	
6635 6640 6645	
attgcctttc cgtacatatc ctgcgcagat gtacgtgtat gctgttatcg attgtcccgt	81733
aaactaataa acg atg aca caa ccc gca tcg tct cgt gta gtc ttt gat	81782
Met Thr Gln Pro Ala Ser Ser Arg Val Val Phe Asp	
6650 6655	
ccc agc aac ccc acc aca ttt tcg gtg gaa gca att gcg gct tac	81827
Pro Ser Asn Pro Thr Thr Phe Ser Val Glu Ala Ile Ala Ala Tyr	
6660 6665 6670	
acc ccc gtt gct tta ata cga ctt tta aac gcc agt gga cct ttg	81872
Thr Pro Val Ala Leu Ile Arg Leu Leu Asn Ala Ser Gly Pro Leu	
6675 6680 6685	
caa cct ggt cac cgt gtg gac atc gct gat gcc aga agc att tac	81917
Gln Pro Gly His Arg Val Asp Ile Ala Asp Ala Arg Ser Ile Tyr	
6690 6695 6700	
acc gtg gga gcc gcg gcc agt gcc gcg cgt gca cgc gct aac cat	81962
Thr Val Gly Ala Ala Ala Ser Ala Ala Arg Ala Arg Ala Asn His	
6705 6710 6715	
aat gca aat acg ata cgc cga acg gcc atg ttt gcc gag act gac	82007
Asn Ala Asn Thr Ile Arg Arg Thr Ala Met Phe Ala Glu Thr Asp	
6720 6725 6730	
cct atg aca tgg tta aga cca acg gtt ggc tta aaa cgt acg ttt	82052
Pro Met Thr Trp Leu Arg Pro Thr Val Gly Leu Lys Arg Thr Phe	
6735 6740 6745	
aac ccg cgt att ata cga cca caa ccc cca aat cca tcc atg agt	82097
Asn Pro Arg Ile Ile Arg Pro Gln Pro Pro Asn Pro Ser Met Ser	
6750 6755 6760	
ttg gga atc tcg ggg cct act ata ttg ccg caa aaa aca cag agc	82142
Leu Gly Ile Ser Gly Pro Thr Ile Leu Pro Gln Lys Thr Gln Ser	

6765	6770	6775	
gcc gat cag tct gct tta caa cag ccc gcc gcg ttg gcg ttt tcg Ala Asp Gln Ser Ala Leu Gln Gln Pro Ala Ala Leu Ala Phe Ser 6780 6785 6790			82187
gga tca tcc ccg caa cac ccc cca cct caa acg acg tcg gca tcc Gly Ser Ser Pro Gln His Pro Pro Pro Gln Thr Thr Ser Ala Ser 6795 6800 6805			82232
gtt gga caa cag caa cac gtg gtg tcg ggg tct tct gga caa caa Val Gly Gln Gln Gln His Val Val Ser Gly Ser Ser Gly Gln Gln 6810 6815 6820			82277
ccg caa cag gga gca cag tca agc act gtc cag cca aca acc gga Pro Gln Gln Gly Ala Gln Ser Ser Thr Val Gln Pro Thr Thr Gly 6825 6830 6835			82322
tca ccg ccc gcg gcc caa ggc gtg cca cag tct acc ccg ccc cca Ser Pro Pro Ala Ala Gln Gly Val Pro Gln Ser Thr Pro Pro Pro 6840 6845 6850			82367
acc caa aat acc ccc cag ggg ggt aag gga cag acc ttg tca cac Thr Gln Asn Thr Pro Gln Gly Gly Lys Gly Gln Thr Leu Ser His 6855 6860 6865			82412
acg gga caa tct gga aac gct tca aga agt cgt agg gtg taa Thr Gly Gln Ser Gly Asn Ala Ser Arg Ser Arg Arg Val 6870 6875 6880			82454
ataaaaatac acagaaaata atcgttgttt tttttttttc tttaataggc gctactttat			82514
atatatgttc catctaataa caatttaaca taccacaggc cttgaaatat atcttccgtg			82574
tggtccatta aaagtttacg tgtatatcta acgttgtcga tcatacgccg acatgcctgg			82634
cttaacagtg ccagtgtcc caaggcggtc cctcggacat aacgtcgacc ggtgactaca			82694
tcggcattaa caacgcgtac gtgcctagga acgcgacatg accgatgttc gtcgagactt			82754
agtacgatag aattttcact ctactgcta tagccgtcag aaggttcact aaaatcactt			82814
tgatataggt ctctgttcgg tgagttaaac gggttagaag atacgcccc a tgtgtgtacg			82874
tcccgcggaa agtttggcga cggtgtgtct gttttatagt ttgtcaatag gtccgttttg			82934
ggggcatcgg ctgccgtgtc aaccacaaga ggtaattgg tatttacagg gtggaatact			82994
gttttgaggt tatacattcg agggtcattt tgatgccgtt tttgtgtttg atttgatttt			83054
tcaatccaag tccggtaaga tatcgagtca tctgtcggaa tggaggtaat ctcaagtatt			83114
ggtttactga acgcttggtt taacgttttg ttttgctgtg gattatTTTT ccaatccgac			83174
aattggttat ttgggtgggg aatactttta caaacggttg ttttaatgga ggtggttaat			83234
tgcttaggta taagcacagc cgtttctgat tcggtttcca catacaaggg aatatctttt			83294
tggttaaggg ttgtttttac gctttggggg ttcttaaaat tttgtaccac tatttgtgtg			83354

cccggttcta	tgggctgcgc	gggctggacg	gtctgcgcgg	gctgcgcggg	ctgcgcgggc	83414
tgcgcgggct	gcgcggggccg	gacggggcatt	tttttacatt	tggaacttct	aacaacttga	83474
acgggagact	taaatagtgg	ctccgttggg	taaaaatcag	ttgtgtcgag	gtttgggggg	83534
ccttggggcg	cataaccggc	aataatttgc	gagtaaaatg	gatcatcggg	acacgagggg	83594
aaagagtcct	catcggagtc	gatgtacggc	aatcaataa	gagattctgg	ccccaaaag	83654
accacataat	ccggagctgg	aatcgagtct	tttcgttccc	ataaaacata	agagggattc	83714
atatgttcgt	ccaatagcag	taaacacggg	ggattgtttg	taagaggttt	gtttgcaatg	83774
agcgcggaca	gtttttctag	ttggacaatt	aaacatgcat	tttcaattgg	gtgaggatcc	83834
atatgcagta	aacgtaaccc	ccaagaaaca	atatcgggag	atacggctga	ggatataccc	83894
gaatctgtag	ccatatgccg	ggaatcgaat	aattttaacc	ccaaagtaag	tccggaattt	83954
tgtgaaaaaa	cggatgtaag	ttccatggca	ataaccaaag	gagcccaaaa	taaaatagcc	84014
gtagttgcta	tgtcaaacgc	tgttacatta	gaaacgtgag	ttggtgccgc	ccccgttact	84074
gtaaaaactg	tcgttgcccc	ggtttgaata	taagcatctg	taattacttt	acggtctgta	84134
ttccactcta	acgtgggtatt	gctgggagcg	gtatcaaatc	ttgcattaag	cgtggatgac	84194
aaatccagtc	tcgcatcaac	tataatgtcc	acatcatctt	gtgttctgta	tgcgaattcc	84254
tccggttgca	gcgtattcca	cattgacact	aaggaaattg	gcgggagaca	catgcgcca	84314
agtacagtaa	tggtcgcaag	acgatctggt	gccattatac	gggtaactgc	atcgacattg	84374
gcctttaccc	cggggggggg	ggaaagtgc	catggcgcaa	aaggatccgt	tattttctgt	84434
ggcattttta	caagtttcca	atctgccatc	cgaaatgcaa	atattctccc	gccggtagga	84494
tcttggtttg	atccaagagc	taacgggagt	ttatgttttg	atggggcggc	attaaaaaag	84554
gcccgggcat	tgcctttcgg	gtctccatcc	aatgagcgaa	cgagtaaacg	acctctaaat	84614
gcggcctcga	ttacgggtct	gagggtagcg	gccatatact	catgctgttt	aattaaatcc	84674
aatctagcaa	aattgagaag	atgtaccggg	gttgtggcaa	ccaaaatagt	tacaatatca	84734
gatagggtta	actctaatac	gcgtacatca	ccccttctct	ggattgggtt	agttagtcca	84794
ttgcccatta	cagaagttag	gtggtgtttt	tcaaaagaat	aaataagctt	gtcccaatga	84854
accccgtatt	gtcgtgtcaa	tggtgttggt	ataaggccgg	cgtatatctc	tgcaatggct	84914
ctgcgtgcgt	tggttttacc	ccattcggcg	tggcgatgcc	taacaaaggt	ggaaaaggca	84974
gaaaaccggg	attttatagc	ggattcgtat	tcaatgcgta	gctcattgac	ctcattggcc	85034
acgcgtaatg	ccgatagtgt	agtttcttcc	acaatacctt	catcgggaag	tgccggtcgt	85094
aaagataatc	caccctgact	gcatagcatg	gttccaagtt	taacccaac	tgatttataa	85154

cacactctat	atcgaagtgg	aaccccatca	gtatccaagt	aaaagggttaa	atTTTTTTcca	85214
aacaaagcgt	ctatagaaga	tctggcttcc	ctaaacgttt	gcaccacaga	cgcctcccc	85274
ataaacgcgg	ccacccgcgc	gcgaatgcat	cgggattggg	cttctagaca	tacacccgac	85334
atggcgggaa	taggagcaaa	tactccgttt	ggagacgcgg	gtggaaaaat	ctcagcataa	85394
cttgcataca	agcctaaccg	taccatgagt	aaatttcgaa	atgtcatata	ctgtgttttt	85454
atccatatag	gcaaatgtgt	aaattgatcg	aatcacgta	ataacatacg	aagaacgtca	85514
tggtcactct	ccgttggaat	acgttcaatt	aaagctcgta	agcgagacgc	ggctctcttca	85574
aactgtcttt	gtttttgcaa	cacaacatcc	aacgccgttt	tacgttcctg	ttgctttttt	85634
tggagacggg	ttttcgtttc	cacaggcaat	aaaaaaaaatt	cgggttcgga	acaaagcatg	85694
tcaaccacag	acgccgatgc	ctggagtgcc	tttatactat	ctacggaagt	agcgtacgtg	85754
ttccccgatg	ccaacatatc	ccccgtttct	cttttaaattg	ttgtccatgc	atcgtcccac	85814
gtaacctcac	cggtttctat	tcgtcgtcgt	aggagatcta	atttagttcg	taacgcataa	85874
agtttatcca	ccctatcttt	ataagtatgc	agggggccgg	taccgtctat	acgcacactt	85934
agtggatggg	agtcaataat	attgcgagct	tggtagatcc	agtcaaccgc	ctgaatgtcc	85994
aacgtaccag	tttcttcttc	cagacgccct	aacagcaatg	caaactgcgt	gacaatgtcc	86054
tgaacggaag	tagatctatc	aatggccaat	gcaattgttt	tgggaggggg	ggtagtttt	86114
aataacgtct	tcagggttagt	gaaatccacg	tcttcttggt	gctcagtggc	attggccgta	86174
tcaacaatgt	tttgtaaaat	ttgtattgca	cggttctttg	ttgcctgaca	caccatacga	86234
aactgtgcaa	gctctgcgtt	ggcctccttt	agatcgcggt	ctaccattgt	ttgtaaaact	86294
ctttcatatg	ccgttcctat	aatcgttta	tgatcgaaag	ttgtaaaata	ctctatagcc	86354
cgaatcaata	aaccttcgct	tggtaatgta	atgaagacac	cttctttaag	tgcaagttta	86414
gccgtttcgt	gtgcccgaac	atgagttact	tcctccaaag	ccttatattgc	ttctgtaagt	86474
ttagccccgg	cagcctgtct	gatgtctgct	ctaagttcac	ttaacgttac	actttcgggt	86534
ataaactgat	cataagaccg	tgtgtaaaaa	tcaacatacc	cagccaatgc	gggtatttgt	86594
aatagatccc	ccgaggttcg	taatatcata	tctcggtagt	taggtattcc	attaatagac	86654
gtatcggcgg	ataataacac	aaccgcgcga	atacgcataa	gcagaaggag	ttcctcaata	86714
ctaacacctg	gaaacataac	ggatgaatacg	ggagccgtaa	tcgaaaaatc	atcaaaccat	86774
gttaaccctc	ttaacaaagc	caaagggtgg	ggaatatattg	tattttcggg	ggatatatgga	86834
ttgtggcgaa	acacagtatc	taatgccgta	acggctgtag	tttcacatgc	cgctacaacc	86894
tgacgtgctt	gtgggtaaac	tgcgtgtata	tcaaaccctc	ccgcagcggc	catatctcgc	86954

aaccgtgcca	gttctgtccc	gttaaataata	tggcgcgctt	ccattgcctc	cagacatgct	87014
ataatatcac	gtgtccaacg	ctcatacaaaa	acccgagtcg	tttgttgttt	atgtgcacgt	87074
tcacaatcgg	taattaacac	ttttgcctgt	tccttcttct	catgtgccat	tgtgacgagt	87134
ttatgaagat	cctttactac	tcgagataag	gtagatgtcc	cagcaataca	atgggggggt	87194
agcttttgca	gttcaacttc	aacaagttta	accgtatcca	ttagggcggtg	cacatttggt	87254
tgtattgata	atatcgcac	gtttatttca	taatcatcta	catttgaaga	tgatataaac	87314
ttcaagtgtc	cagatgagac	agctaggggtg	gagaagtcac	ctccaagttg	tttttgtaat	87374
tcagtcaact	tatgggtatt	cgtaatttct	tgttgtaaag	cctgatattt	tttatataac	87434
gacaacacaa	aggataaggc	tggcactgta	gatgaaacta	acgtcgcctt	actaagagtt	87494
gcaacaacag	cgtttatggc	ggactcactt	tccgggttag	tagatacggg	cgcgatgtcg	87554
gatgcaagca	catctgccac	gtcaccaaaa	aacgcaagca	atgatgggtc	atactccgta	87614
ggtatcggca	caatttcgat	aatagctgta	aaacaagctc	ccagtcctcc	taagacagat	87674
gtgcgtgcgt	ttccgggatg	ttctaaaatg	tctcgatatt	ggttaaataa	cgcccagaaa	87734
tcacccgtaa	gttgagaacg	gatctctacc	ggcgcctcta	agactttggg	cctgagattt	87794
accagggctc	cttggacatc	taactcagaa	gcaagttccg	gtaataaatc	tactgcagcc	87854
ctaagtccca	caaaaccggg	taccggggcg	agtaaccccc	cgagtttatt	atatgccgcc	87914
tgttttcgac	tctttattgt	gtcctgtgtg	gttcggggcct	cgtttgcata	cgtctgaacc	87974
tctttaagcc	ttgtttccaa	tcgtctttta	atcgaagggt	gtaaaccgga	ttggatcatt	88034
ggatcactta	aaatttttat	ctgtcgcacc	aaatcgtctg	tagcacgtac	aattggtgct	88094
aataaatcat	cccgtgttat	ttcaggatac	ttgacctcac	cattgttata	tgtttcatag	88154
tcctttacgg	cttgggtctac	ggccgcgctt	agcgtattaa	agcaagacaa	ctctgcttcc	88214
gcggaagccc	gttgcggtgc	gcgtgtatta	atggttttta	ttgtacgtga	taattcatcg	88274
aactctcgtc	tggataagta	acctgcgggt	tgagcttccc	cgactacaga	taaccacgat	88334
acgagagccg	tgtctgtggt	taaatcttcc	ccttctttta	taagctcttt	taacagagat	88394
acgacgggga	gattttgtat	agtctcagga	ggagggtgta	tagacaggga	cgatatgatt	88454
gccgttaatt	tagcgtcgaa	ttccggaaga	gaatctaaaa	gccgttgaat	gggtgccgta	88514
cttgcggtcg	cgacccgaaa	acgcctaggg	gattgttcag	cgatcaaggc	ccgtgtgcta	88574
tataacactc	cgcggggtgaa	gtattctgta	acagccgagg	tcaatagcat	tgtaacttcg	88634
gatcgtatct	catatacacg	ccgaattaac	tcttcgggtg	gaatgtcggt	ttcttccggg	88694
ggttcctggg	gaacttctgg	tatttgaatg	gcacaaatct	tattgcgggt	agaccgtaat	88754

gcattctcta	aagcctttac	actagaaaca	agcgcggtgt	gttcacgcat	atagcgtgtc	88814
tcccgggccc	agactaattc	acaaagaaga	cgtattcggt	cagacaggga	ccctgtacgg	88874
gttggaataa	gctcggcaaa	aagtccggga	tgagaaataa	taggcgaatt	tagtatactt	88934
ataagacctg	tcgacagtct	agaatagagg	tctatgggcg	acgaacctcc	tagatccgct	88994
tctaacacat	ctagttcggc	atgtaaagcg	ccggttggtat	cctgaacctcg	catggcaact	89054
agaccaaact	tagcgataat	gagcatgcca	attgtacatt	ttttccggag	aacagtttta	89114
atagcatatt	ccgcccccg	catgtttggt	aatatcaaac	ttgtaacgcg	tataagttcc	89174
gcggcggagg	gaaatcctgt	taaaatttcc	ccaaggggac	ctataaagtc	tgatacaacg	89234
cttgtagcac	catgatgtgt	acgtgttcca	ttttccacca	caaatcccgt	taaacgcaaa	89294
atggtgaggt	taataaaaag	ctccaatgga	tccttttctgt	ctggcataac	caagggcctt	89354
gttacccaaa	tgggaacatt	tgtatgaccg	gtaataacag	tatccaacgt	acccaccgca	89414
ttttgtacgt	atccattgct	aatttcatgc	ccatgttgta	gtagtttttc	gacaaccatg	89474
ttgacatcac	cactctgttc	aaatagaaat	ggcttccgat	ctttcaaact	gcttcctaca	89534
ttcatgttcc	gtgaaaaagt	gggactggat	tcaggcggtat	ctacattgga	tacatttaac	89594
acaacgtctg	gggtgttagc	aacttctcgt	aggcggggta	atacatgtgc	cacttgtggt	89654
ttatccggca	cgtctacagt	tggtttaaat	ttgagaacct	ttttagcggg	tttatgtaaa	89714
ttatccgtgg	aatgtgtatt	atttaccaag	ccatcgtcga	tacaagctaa	attttcctcg	89774
cttgaaggag	gagtccatga	aggacggcgt	ctacgacgac	aatccaaaac	gccagaccca	89834
gtcagagggtg	tttctagaac	cgcattgcca	ggatcaacct	cgctgtaact	acatctaggg	89894
tccagtgcaa	ccgtgttggt	taacgttgaa	tgtagggttg	cttccaagga	tacactttca	89954
ccaacgtttt	ggtgaagagg	tactatagac	gatttattaa	gcacaattgt	cgtggaatta	90014
ggaggtgaaa	gaagcaacgg	atgttgagct	gtaaccagtt	tttcgcaata	ttgttcatct	90074
gtaaaatatg	tatcacagct	tccgtatata	agcgttactg	ccgaagatag	cgcttcttcg	90134
cttacgggac	cgtcgtttgc	ggtgacaaaa	aaaactaatg	cagcggccca	ttgggattct	90194
acgttatcgg	ggcgggtgggt	atactccgat	gcgatataag	agtacacatc	cgtggtattc	90254
acccgaacaa	ctacagcctg	tcctatagtc	ccatggccat	gtggatcaaa	aataaaagat	90314
atgtttccct	gacgatagat	ggccattccc	gttgagtcta	cagttataat	tgtatacgac	90374
tcttcacgtc	ccatccacac	atcatcgaaa	aacgctctag	cggaattttg	tgtgcacata	90434
aaaccctcgt	ctggaacggt	aaaaaaatgg	ctatcgccgt	atattctaga	caaaacgcag	90494
cacgtactgg	tagtgtcccc	cagtttaata	tatgaaattc	gattggggag	atcaacaaga	90554

gcacacatat	ctgggacacc	cctccccata	ttagacagat	ccgtagtcca	tgctgcaccc	90614
tcttgtaaac	atccatcaat	catgtctgat	gacaggggtg	cattaattcc	atgcgcatat	90674
gtcatatgca	aaaacgataa	agatgttctt	aaacatgaca	gacctgacgc	cggtcccagg	90734
gcaccgtcaa	attgattacg	gcttcccact	cccgcaacag	tgacagctat	aggcggaatt	90794
atatccattt	tattgcttac	gaaaattacg	cgctcaactg	gtaggggacgc	tacgttttacg	90854
atgattcaaa	tcccaaagag	cggtgaataa	gcacgtgtag	ctccaaaaac	ctaggagggtt	90914
atgaaaatac	tagcaacaac	agcggttatac	aaacgaaacg	cccagtcaat	aaaaaccaca	90974
aatactttta	tgtacataaa	cacgcctggt	ttatattaag	ggtcactccc	acttgtattc	91034
ccgggtacgc	caagacgcaa	atctacatta	gataaaatct	catctggacg	aagccatctt	91094
tgctctatta	tcagcgtcgg	agcctctgaa	attacgtctc	tgaccgttgt	cgttatttta	91154
acattatcat	gtaaaaacgt	tgcatttaca	ttctcccatg	ttcctatatt	acattgtgaa	91214
gttaaaaccg	cgcccatctg	aggtccagaa	tccacaataa	actgttgcct	ggagtccata	91274
acgaatgaaa	ctgctgcctt	gtgatcttcc	agatttcggg	cgtgactcat	atatgagggtt	91334
ggggcattta	cacgatcctc	ttgtatatatt	tttaaaccgc	gcctcaattc	attacacacg	91394
gttgcaatag	attcggccga	cgggactgcc	gtggcatgcc	tacaagctgt	tgctattcgt	91454
tcccacctat	ttaaaaaaat	ctctacattt	gcaagaccgg	gtatatatttc	tcctgttggt	91514
agtttgtcaa	cacgcattaa	aatgtccatt	tgatcctgtg	taaaccgtgc	ataccgggaa	91574
gccatcgttg	aaaaaagagg	ccaatagca	gaagtggagg	ttttagtcat	taaattttca	91634
cattccctaa	gggctgagga	agcatcggcc	ataattgtgc	gcaggctgga	tattcccact	91694
ctcatttgcg	ttcggattcc	ttgtattgtc	ccaacaatat	gaccaaccgc	atcagcaaga	91754
tcgtttaaac	gccatacccc	aaattgttca	tcgcgttcaa	cctttggggt	acagatacca	91814
acagcctgaa	gatctggcgt	tggataaaaa	cgacacgcaa	aaaatttttg	taacattaac	91874
atgtaccgag	aaaccactaa	cgcgttggat	gtaaaatttt	caaccaacgc	ctgcgatggt	91934
ttatccagtc	gggtccaacg	accgtaaagt	tcatcataat	agagagttgc	taaaaaaacg	91994
ctatttgtaa	tagaaggacg	gtcaggaacc	aaaggacgga	cgtgctgggg	aagcagggtca	92054
acggcaatgc	caacagtccg	atgaagtctg	catataaggg	aatctatagt	agaaacgtga	92114
gatggtaaaa	gtactggggg	gtgtgtacgg	gtaaaagggt	ctaataattgt	tataagagca	92174
gatagttttg	tgcgatatcc	atctgcattg	ggcacgggtc	cggatccata	atcgcgagcc	92234
cactgaagaa	tagacaaggc	ttgctgtatt	ccccgtgtat	caaaagacaa	agctattggt	92294
gccgaaaggg	catcaagcgt	gcttggttgc	ataatataag	gcacaaacga	cggttccaca	92354

aacacgctag	agcgattata	ttcggtagga	tatgcaatct	ttagtgcttc	tgttatcatg	92414
acagcttcca	accctgtagc	cggtggatca	acacaaatag	gaggtgtcat	acccacatcc	92474
accgggggag	taatacccca	tcttgaatcc	atacgtaggt	caaaccaggt	tagtacggct	92534
tcgcgtacgg	cactttgtcc	tgcttgtggt	aataacgcac	ctgaggattg	attatgtggt	92594
tgcttaaaat	atgttgtctc	tctagcttct	gcatgtgaaa	tttcattaag	tagtattacg	92654
cgtgtcgcct	gtatactttc	aataaggggt	cgtggagcaa	aacagcgccg	cataatttgt	92714
cccaggcctc	ccggtggtaa	tcctaaggcg	ggtaatagcg	tttcataccg	tttttcggtc	92774
tcgtttactg	tccgtgtata	tgттаacaca	tactcggtag	taggagcgta	cgtttccact	92834
aattggatatg	ccagtccacc	cactaaagcg	agacatccta	gtgtttggtg	gaaatctgta	92894
atatgctcgt	ctgctacaac	gcttccgtga	ataaaaccgg	cgagtgtgtg	gtgagcaata	92954
aaccgacgta	gcaatttgca	tgaaaatctt	gtaaaccg	attcggcaag	ggtgcttatt	93014
aacatactag	gcgatgtact	agcctgaacc	ttttcccaa	tgccacgggt	gtgttctgct	93074
acattacttc	cagatgtggt	ttccgcttcc	gggtcggagt	ttagtaaag	taacagcgcc	93134
tcaatatgaa	ttccgggggt	ggacaacgat	aagagggtgc	tttcccatat	accattgtct	93194
aatctaagtc	tcctagcaag	cattcccggg	gatgtctcaa	aaacataagg	gtctcgataa	93254
gccagagctg	aggaaattcg	tgactcgtgc	accgttcgtg	gattcgttac	cgcttcttcg	93314
atggatacga	acgcctcatc	tttaattaaa	tttacagtat	ctgcaaataa	ttctgatatg	93374
ctatgtactg	gcgtttccgt	gagatattca	tcaatcatac	agattataaa	aagggtcgt	93434
gtagaggag	tgagtgagct	attttgaatc	tgattccaca	taacattaaa	cggaagaagc	93494
catcctgcat	attgtgttaa	aacacgaatc	ccctcttgaa	caaatggcat	atcgtaaag	93554
atcgcaaatt	tatgttgtgt	taaagctgca	atggcgcttt	ccaacattcc	aatacgagcg	93614
tgagtgaatg	gtgattcaat	ggctgttggt	gcatacctta	aggcgacctc	gtacatat	93674
atccagtccg	ttataatgaa	gtgtatcgaa	acgggtccaa	atttagacga	ggttcgtaat	93734
ttattggccg	ataaacgatg	taacgtctcg	gaatcttgta	ctacacttga	tagctggggt	93794
aaaattttta	agctattacc	tggtcctct	atcgccagt	ctagatctag	tctccaaaac	93854
aacagtccgg	gtaaattttc	ggccgtgaaa	gcagcctccg	ccaaaaatgt	attggaatat	93914
acaaaacaga	tattagaatg	caggggttcc	catatctgaa	taaaatgttt	agctggaatt	93974
ttctgggtag	atcgtaaaaa	cttaactacc	ttaactctgg	cgatttctgt	tttctctggt	94034
gaccatggtc	tttcgttgtc	cgcttcttgt	actttcaagt	tacttaaate	atccaaaagt	94094
ttttgtgtat	cataacaaat	tggttcttcc	atggtatatt	ctacgctgac	ttaactttat	94154

aacgtgatat	gaaaaagcta	catccgtccg	gaatgaaaag	acataaatgt	aacatcaata	94214
aaaacgcatg	ttaataaaaa	ggacgtcacg	gtaagttgaa	gaacctttta	acgccaatca	94274
aaatatTTTT	ataggctcct	cctacctaac	attatataaa	cggtactacg	actgtataat	94334
gtgtacacat	accccaggca	acatttcaga	tagtaccacg	tcacgattgc	attgtgtgaa	94394
tttaaccct	cagct	atg ggg agt	caa cca acc aac	tcg cat	ttt act	94442
		Met Gly Ser	Gln Pro Thr Asn	Ser His	Phe Thr	
			6885		6890	
tta aac gaa	caa acg cta	tgt gga	act aat atc	agt ctt	tta gga	94487
Leu Asn Glu	Gln Thr Leu	Cys Gly	Thr Asn Ile	Ser Leu	Leu Gly	
	6895		6900		6905	
aat aac cgt	ttt att caa	ata ggg	aac ggg ctt	cat atg	act tat	94532
Asn Asn Arg	Phe Ile Gln	Ile Gly	Asn Gly Leu	His Met	Thr Tyr	
	6910		6915		6920	
gct ccg ggc	ttc ttc gga	aat tgg	agt cgc gat	tta aca	att ggc	94577
Ala Pro Gly	Phe Phe Gly	Asn Trp	Ser Arg Asp	Leu Thr	Ile Gly	
	6925		6930		6935	
cct cgc ttt	gga ggt ctg	aac aaa	caa ccg ata	cat gta	cca cca	94622
Pro Arg Phe	Gly Gly Leu	Asn Lys	Gln Pro Ile	His Val	Pro Pro	
	6940		6945		6950	
aaa cgt aca	gaa acc gcg	tct att	caa gta acc	ccc cgt	tca att	94667
Lys Arg Thr	Glu Thr Ala	Ser Ile	Gln Val Thr	Pro Arg	Ser Ile	
	6955		6960		6965	
gtt att aat	cgt atg aac	aac att	caa ata aat	cca act	tca att	94712
Val Ile Asn	Arg Met Asn	Asn Ile	Gln Ile Asn	Pro Thr	Ser Ile	
	6970		6975		6980	
ggt aac ccg	caa gtt acc	att aga	ctc ccg tta	aat aat	ttt aaa	94757
Gly Asn Pro	Gln Val Thr	Ile Arg	Leu Pro Leu	Asn Asn	Phe Lys	
	6985		6990		6995	
tca acg aca	cag cta atc	caa caa	gtg tca tta	acc gat	ttt ttt	94802
Ser Thr Thr	Gln Leu Ile	Gln Gln	Val Ser Leu	Thr Asp	Phe Phe	
	7000		7005		7010	
cgt ccg gac	att gag cat	gct ggg	tca atc gtc	tta atc	ctt cgt	94847
Arg Pro Asp	Ile Glu His	Ala Gly	Ser Ile Val	Leu Ile	Leu Arg	
	7015		7020		7025	
cat cca tct	gac atg att	gga gaa	gct aat aca	ctt aca	cag gct	94892
His Pro Ser	Asp Met Ile	Gly Glu	Ala Asn Thr	Leu Thr	Gln Ala	
	7030		7035		7040	
gga cgt gac	ccc gat gta	cta cta	gag ggt tta	cga aac	cta ttc	94937
Gly Arg Asp	Pro Asp Val	Leu Leu	Glu Gly Leu	Arg Asn	Leu Phe	
	7045		7050		7055	
aat gcc tgc	acg gct cct	tgg acc	gtt gga gaa	ggt ggg	ggg ctt	94982
Asn Ala Cys	Thr Ala Pro	Trp Thr	Val Gly Glu	Gly Gly	Gly Leu	
	7060		7065		7070	

aga gca tat gta acg tca tta agt ttc atc gcc gca tgc cgg gca	95027
Arg Ala Tyr Val Thr Ser Leu Ser Phe Ile Ala Ala Cys Arg Ala	
7075 7080 7085	
gaa gaa tat acg gat aaa cag gca gcg gat gcc aac aga aca gca	95072
Glu Glu Tyr Thr Asp Lys Gln Ala Ala Asp Ala Asn Arg Thr Ala	
7090 7095 7100	
att gtt tct gcc tat gga tgc agt cgt atg gaa acg cgg ctc ata	95117
Ile Val Ser Ala Tyr Gly Cys Ser Arg Met Glu Thr Arg Leu Ile	
7105 7110 7115	
agg ttt tcg gag tgt tta cgt gcg atg gta caa tgt cat gta ttt	95162
Arg Phe Ser Glu Cys Leu Arg Ala Met Val Gln Cys His Val Phe	
7120 7125 7130	
cca cat cga ttt ata agt ttt ttt ggg tcc ctg ctg gaa tat acc	95207
Pro His Arg Phe Ile Ser Phe Phe Gly Ser Leu Leu Glu Tyr Thr	
7135 7140 7145	
att cag gat aat tta tgc aat ata acc gcc gtg gcc aaa ggt ccc	95252
Ile Gln Asp Asn Leu Cys Asn Ile Thr Ala Val Ala Lys Gly Pro	
7150 7155 7160	
caa gaa gct gca cgt aca gac aaa act tca act cgc agg gtc aca	95297
Gln Glu Ala Ala Arg Thr Asp Lys Thr Ser Thr Arg Arg Val Thr	
7165 7170 7175	
gcc aac atc ccg gcc tgc gta ttt tgg gac gtt gac aaa gat tta	95342
Ala Asn Ile Pro Ala Cys Val Phe Trp Asp Val Asp Lys Asp Leu	
7180 7185 7190	
cat ctt tcc gcg gac gga ctg aag cat gtg ttc ttg gtt ttt gta	95387
His Leu Ser Ala Asp Gly Leu Lys His Val Phe Leu Val Phe Val	
7195 7200 7205	
tat aca cag cga cgc caa cga gaa ggt gta aga ctg cat ctt gca	95432
Tyr Thr Gln Arg Arg Gln Arg Glu Gly Val Arg Leu His Leu Ala	
7210 7215 7220	
tta agc caa cta aac gaa caa tgt ttt ggt cgt ggt att ggc ttc	95477
Leu Ser Gln Leu Asn Glu Gln Cys Phe Gly Arg Gly Ile Gly Phe	
7225 7230 7235	
ctg tta gga cgc ata cga gct gaa aat gcc gcc tgg ggg act gaa	95522
Leu Leu Gly Arg Ile Arg Ala Glu Asn Ala Ala Trp Gly Thr Glu	
7240 7245 7250	
ggg gtt gca aat acc cac cag cca tat aac aca agg gcg ttg ccg	95567
Gly Val Ala Asn Thr His Gln Pro Tyr Asn Thr Arg Ala Leu Pro	
7255 7260 7265	
ctt gtg cag tta tcc aat gac ccg aca agc cct cga tgt agt att	95612
Leu Val Gln Leu Ser Asn Asp Pro Thr Ser Pro Arg Cys Ser Ile	
7270 7275 7280	
ggc gaa att aca gga gta aat tgg aac ttg gct aga cag cga ttg	95657
Gly Glu Ile Thr Gly Val Asn Trp Asn Leu Ala Arg Gln Arg Leu	
7285 7290 7295	

tat caa tgg acc ggc gat ttt cgg gga ctt ccc aca caa tta tcc	95702
Tyr Gln Trp Thr Gly Asp Phe Arg Gly Leu Pro Thr Gln Leu Ser	
7300 7305 7310	
tgc atg tat gcg gca tat acg tta att gga aca att cca tca gag	95747
Cys Met Tyr Ala Ala Tyr Thr Leu Ile Gly Thr Ile Pro Ser Glu	
7315 7320 7325	
tct gtg cgt tat aca aga cgc atg gaa cgg ttc gga ggt tat aac	95792
Ser Val Arg Tyr Thr Arg Arg Met Glu Arg Phe Gly Gly Tyr Asn	
7330 7335 7340	
gtg cca act att tgg tta gag ggg gtt gtg tgg ggg ggt aca aat	95837
Val Pro Thr Ile Trp Leu Glu Gly Val Val Trp Gly Gly Thr Asn	
7345 7350 7355	
aca tgg aac gaa tgt tat tat taa agcatgtatg taaaataaac tgaatttaac	95891
Thr Trp Asn Glu Cys Tyr Tyr	
7360	
atagcgtggg ttttgcgtga tattatatac tggggagggg caggctgtac gtaaccatat	95951
ataagggagt ctacaatatt gtagaactaa ctcagctgtg agtttagggg ttaaagggtt	96011
attccggagc ctaaatacgt tatccgtt atg gag ttc aaa aga att ttt aat	96063
Met Glu Phe Lys Arg Ile Phe Asn	
7365 7370	
acg gtt cat gac att ata aac cga tta tgt caa cat ggc tac aag	96108
Thr Val His Asp Ile Ile Asn Arg Leu Cys Gln His Gly Tyr Lys	
7375 7380 7385	
gaa tac atc att ccg ccc gaa tca acc aca ccg gtg gaa tta atg	96153
Glu Tyr Ile Ile Pro Pro Glu Ser Thr Thr Pro Val Glu Leu Met	
7390 7395 7400	
gag tat att agc act atc gtc tca aaa ctt aag gcg gtg acg cga	96198
Glu Tyr Ile Ser Thr Ile Val Ser Lys Leu Lys Ala Val Thr Arg	
7405 7410 7415	
caa gat gag cga gtg tac cga tgt tgt gga gaa ctt atc cat tgc	96243
Gln Asp Glu Arg Val Tyr Arg Cys Cys Gly Glu Leu Ile His Cys	
7420 7425 7430	
cgt att aac cta cga tcc gtt tcc atg gaa acg tgg ttg act tcc	96288
Arg Ile Asn Leu Arg Ser Val Ser Met Glu Thr Trp Leu Thr Ser	
7435 7440 7445	
cca att ctc tgt tta act ccc cga gtc cgc caa gca att gaa ggg	96333
Pro Ile Leu Cys Leu Thr Pro Arg Val Arg Gln Ala Ile Glu Gly	
7450 7455 7460	
cgg agg gac gaa att cgt cgg gct ata tta gaa ccg ttt ttg aaa	96378
Arg Arg Asp Glu Ile Arg Arg Ala Ile Leu Glu Pro Phe Leu Lys	
7465 7470 7475	
gat caa tac ccc gct tta gct acc ctt gga cta cag tct gct tta	96423
Asp Gln Tyr Pro Ala Leu Ala Thr Leu Gly Leu Gln Ser Ala Leu	
7480 7485 7490	

aag tac gaa gac ttt tat tta act aag tta gag gaa ggt aaa tta	96468
Lys Tyr Glu Asp Phe Tyr Leu Thr Lys Leu Glu Glu Gly Lys Leu	
7495 7500 7505	
gag tcg ctt tgc caa ttc ttt tta aga ctg gcg gcc acc gtg aca	96513
Glu Ser Leu Cys Gln Phe Phe Leu Arg Leu Ala Ala Thr Val Thr	
7510 7515 7520	
aca gaa atc gta aac ctg cct aaa atc gca act ctt att ccc gga	96558
Thr Glu Ile Val Asn Leu Pro Lys Ile Ala Thr Leu Ile Pro Gly	
7525 7530 7535	
ata aat gat ggt tat aca tgg act gat gtc tgt cgg gta ttt ttc	96603
Ile Asn Asp Gly Tyr Thr Trp Thr Asp Val Cys Arg Val Phe Phe	
7540 7545 7550	
aca gcg ttg gca tgt cag aaa att gtc ccg gct aca ccg gtt atg	96648
Thr Ala Leu Ala Cys Gln Lys Ile Val Pro Ala Thr Pro Val Met	
7555 7560 7565	
atg ttt tta ggt cga gag acc ggg gca acg gcc agt tgt tat tta	96693
Met Phe Leu Gly Arg Glu Thr Gly Ala Thr Ala Ser Cys Tyr Leu	
7570 7575 7580	
atg gac ccg gaa tcc atc act gtt ggg aga gct gtt cga gct atc	96738
Met Asp Pro Glu Ser Ile Thr Val Gly Arg Ala Val Arg Ala Ile	
7585 7590 7595	
aca ggc gat gtg gga acg gta tta caa agt cga ggt gga gtg gga	96783
Thr Gly Asp Val Gly Thr Val Leu Gln Ser Arg Gly Gly Val Gly	
7600 7605 7610	
att tct cta cag agt ctg aat tta ata cct acg gaa aat caa acg	96828
Ile Ser Leu Gln Ser Leu Asn Leu Ile Pro Thr Glu Asn Gln Thr	
7615 7620 7625	
aaa ggt ctt ctt gca gtt tta aaa ctt tta gat tgc atg gtt atg	96873
Lys Gly Leu Leu Ala Val Leu Lys Leu Leu Asp Cys Met Val Met	
7630 7635 7640	
gca att aac agt gat tgt gaa cga cca act gga gtt tgt gtt tac	96918
Ala Ile Asn Ser Asp Cys Glu Arg Pro Thr Gly Val Cys Val Tyr	
7645 7650 7655	
ata gaa cca tgg cac gtc gat cta caa act gtt ttg gcc aca cgt	96963
Ile Glu Pro Trp His Val Asp Leu Gln Thr Val Leu Ala Thr Arg	
7660 7665 7670	
gga atg ttg gtt cgt gat gaa ata ttt cga tgt gat aac ata ttt	97008
Gly Met Leu Val Arg Asp Glu Ile Phe Arg Cys Asp Asn Ile Phe	
7675 7680 7685	
tgt tgt tta tgg acc cca gat tta ttt ttt gaa aga tac cta agc	97053
Cys Cys Leu Trp Thr Pro Asp Leu Phe Phe Glu Arg Tyr Leu Ser	
7690 7695 7700	
tat cta aaa ggg gct agt aat gtt cag tgg act ctt ttt gat aac	97098
Tyr Leu Lys Gly Ala Ser Asn Val Gln Trp Thr Leu Phe Asp Asn	
7705 7710 7715	

aga gcc gat	atc ctt cga	aca tta	cac ggg gag	gca ttc	act tca	97143
Arg Ala Asp	Ile Leu Arg	Thr Leu	His Gly Glu	Ala Phe	Thr Ser	
7720		7725		7730		
acc tat tta	cgt tta gag	aga gaa	gga tta ggc	gtt tct	tct gtt	97188
Thr Tyr Leu	Arg Leu Glu	Arg Glu	Gly Leu Gly	Val Ser	Ser Val	
7735		7740		7745		
ccc att caa	gat atc gca	ttc aca	atc ata cgc	agt gct	gct gta	97233
Pro Ile Gln	Asp Ile Ala	Phe Thr	Ile Ile Arg	Ser Ala	Ala Val	
7750		7755		7760		
aca gga agc	ccc ttt tta	atg ttc	aaa gat gcc	tgt aat	cgt aat	97278
Thr Gly Ser	Pro Phe Leu	Met Phe	Lys Asp Ala	Cys Asn	Arg Asn	
7765		7770		7775		
tat cat atg	aat acc caa	gga aat	gct atc acg	ggg tca	aat ttg	97323
Tyr His Met	Asn Thr Gln	Gly Asn	Ala Ile Thr	Gly Ser	Asn Leu	
7780		7785		7790		
tgt acg gaa	att gtt caa	aag gca	gac gct cat	caa cat	ggc gta	97368
Cys Thr Glu	Ile Val Gln	Lys Ala	Asp Ala His	Gln His	Gly Val	
7795		7800		7805		
tgt aat ctt	gcc agc ata	aat ctt	aca acg tgc	tta tcc	aaa ggc	97413
Cys Asn Leu	Ala Ser Ile	Asn Leu	Thr Thr Cys	Leu Ser	Lys Gly	
7810		7815		7820		
cca gtg tca	ttt aat tta	aac gac	ctt caa ttg	aca gca	aga acg	97458
Pro Val Ser	Phe Asn Leu	Asn Asp	Leu Gln Leu	Thr Ala	Arg Thr	
7825		7830		7835		
act gtt att	ttt tta aac	ggg gtc	ctg gcg gct	ggg aac	ttt cca	97503
Thr Val Ile	Phe Leu Asn	Gly Val	Leu Ala Ala	Gly Asn	Phe Pro	
7840		7845		7850		
tgt aaa aaa	tca tgt aaa	ggt gta	aaa aac aac	cga tca	ctt ggc	97548
Cys Lys Lys	Ser Cys Lys	Gly Val	Lys Asn Asn	Arg Ser	Leu Gly	
7855		7860		7865		
att ggc ata	caa ggg tta	cat aca	act tgt ctc	cgc tta	gga ttt	97593
Ile Gly Ile	Gln Gly Leu	His Thr	Thr Cys Leu	Arg Leu	Gly Phe	
7870		7875		7880		
gat tta act	tcc caa cca	gct aga	cgg tta aat	gta caa	ata gcg	97638
Asp Leu Thr	Ser Gln Pro	Ala Arg	Arg Leu Asn	Val Gln	Ile Ala	
7885		7890		7895		
gag tta atg	ttg tat gag	aca atg	aaa aca agc	atg gaa	atg tgt	97683
Glu Leu Met	Leu Tyr Glu	Thr Met	Lys Thr Ser	Met Glu	Met Cys	
7900		7905		7910		
aag att ggc	ggc tta gcc	ccg ttt	aag ggt ttt	acc gaa	agt aaa	97728
Lys Ile Gly	Gly Leu Ala	Pro Phe	Lys Gly Phe	Thr Glu	Ser Lys	
7915		7920		7925		
tat gct aag	gga tgg tta	cac caa	gat ggg ttt	tct acg	ata agt	97773
Tyr Ala Lys	Gly Trp Leu	His Gln	Asp Gly Phe	Ser Thr	Ile Ser	
7930		7935		7940		

tat tta gat	tta cca tgg tgt acc	ctg cga gat gat att	tgc gct	97818
Tyr Leu Asp	Leu Pro Trp Cys Thr	Leu Arg Asp Asp Ile	Cys Ala	
7945	7950	7955		
tat ggg tta	tac aac tcg cag ttc	tta gcg tta atg ccc	aca gtt	97863
Tyr Gly Leu	Tyr Asn Ser Gln Phe	Leu Ala Leu Met Pro	Thr Val	
7960	7965	7970		
tca tct gca	cag gta acg gag tgc	agt gag ggt ttc tct	cca att	97908
Ser Ser Ala	Gln Val Thr Glu Cys	Ser Glu Gly Phe Ser	Pro Ile	
7975	7980	7985		
tat aat aat	atg ttt agt aag gtc	acc acc tcg ggt gag	tta ctt	97953
Tyr Asn Asn	Met Phe Ser Lys Val	Thr Thr Ser Gly Glu	Leu Leu	
7990	7995	8000		
aga ccc aac	tta gac ctt atg gac	gaa cta aga gat atg	tat tca	97998
Arg Pro Asn	Leu Asp Leu Met Asp	Glu Leu Arg Asp Met	Tyr Ser	
8005	8010	8015		
tgt gaa gaa	aaa cga ctg gaa gtt	ata aac ata ctt gag	aaa aac	98043
Cys Glu Glu	Lys Arg Leu Glu Val	Ile Asn Ile Leu Glu	Lys Asn	
8020	8025	8030		
caa tgg tca	gta ata cgt tcg ttt	ggc tgt tta tct aat	agt cac	98088
Gln Trp Ser	Val Ile Arg Ser Phe	Gly Cys Leu Ser Asn	Ser His	
8035	8040	8045		
cca ctc tta	aaa tat aaa aca gcg	ttt gaa tat gag caa	gag gat	98133
Pro Leu Leu	Lys Tyr Lys Thr Ala	Phe Glu Tyr Glu Gln	Glu Asp	
8050	8055	8060		
ctc gtt gat	atg tgt gca gaa agg	gcg cca ttt att gac	caa agt	98178
Leu Val Asp	Met Cys Ala Glu Arg	Ala Pro Phe Ile Asp	Gln Ser	
8065	8070	8075		
caa tca atg	act tta ttt att gag	gaa cgc cca gac ggg	aca att	98223
Gln Ser Met	Thr Leu Phe Ile Glu	Glu Arg Pro Asp Gly	Thr Ile	
8080	8085	8090		
ccc gcc tcc	aaa ata atg aat ttg	ctt ata cgt gcc tat	aaa gcc	98268
Pro Ala Ser	Lys Ile Met Asn Leu	Leu Ile Arg Ala Tyr	Lys Ala	
8095	8100	8105		
ggc ctt aaa	acg ggt atg tac tac	tgt aaa att cgt aaa	gct acg	98313
Gly Leu Lys	Thr Gly Met Tyr Tyr	Cys Lys Ile Arg Lys	Ala Thr	
8110	8115	8120		
aac agc gga	ctg ttt gcg gga ggc	gaa tta acc tgt acc	agt tgt	98358
Asn Ser Gly	Leu Phe Ala Gly Gly	Glu Leu Thr Cys Thr	Ser Cys	
8125	8130	8135		
gct tta taa	atttacacgg gaaactattc	caaa atg gat cag aaa	gat tgc	98409
Ala Leu		Met Asp Gln Lys Asp	Cys	
		8140	8145	
agt cat ttt	ttt tac agg ccg gag	tgt cca gat ata aac	aat tta	98454
Ser His Phe	Phe Tyr Arg Pro Glu	Cys Pro Asp Ile Asn	Asn Leu	
	8150	8155	8160	

cgt gcc ctg agc att	tcg aat cgt tgg tta	gaa agc gat ttt atc	98499
Arg Ala Leu Ser Ile	Ser Asn Arg Trp Leu	Glu Ser Asp Phe Ile	
8165	8170	8175	
att gaa gat gat tat	caa tac ttg gac tgt	tta acg gaa gat gaa	98544
Ile Glu Asp Asp Tyr	Gln Tyr Leu Asp Cys	Leu Thr Glu Asp Glu	
8180	8185	8190	
cta ata ttc tac aga	ttt att ttt aca ttt	tta tcg gcg gca gat	98589
Leu Ile Phe Tyr Arg	Phe Ile Phe Thr Phe	Leu Ser Ala Ala Asp	
8195	8200	8205	
gat ctg gta aat gtt	aat ttg ggc tct cta	acc caa ctc ttt tcc	98634
Asp Leu Val Asn Val	Asn Leu Gly Ser Leu	Thr Gln Leu Phe Ser	
8210	8215	8220	
caa aag gat att cac	cat tac tac att gaa	caa gag tgc atc gag	98679
Gln Lys Asp Ile His	His Tyr Tyr Ile Glu	Gln Glu Cys Ile Glu	
8225	8230	8235	
gtt gtc cac gcg cgt	gtc tat agt caa att	caa cta atg ttg ttc	98724
Val Val His Ala Arg	Val Tyr Ser Gln Ile	Gln Leu Met Leu Phe	
8240	8245	8250	
aga ggg gat gaa tcg	ttg cgg gta caa tac	gta aat gtc act att	98769
Arg Gly Asp Glu Ser	Leu Arg Val Gln Tyr	Val Asn Val Thr Ile	
8255	8260	8265	
aat aat ccg tcg atc	caa caa aaa gta caa	tgg ttg gaa gaa aag	98814
Asn Asn Pro Ser Ile	Gln Gln Lys Val Gln	Trp Leu Glu Glu Lys	
8270	8275	8280	
gta cgg gac aac cca	tcc gtt gca gaa aaa	tat ata cta atg att	98859
Val Arg Asp Asn Pro	Ser Val Ala Glu Lys	Tyr Ile Leu Met Ile	
8285	8290	8295	
ctt ata gag gcg att	ttt ttt gta tca tcg	ttc gcg gct att gca	98904
Leu Ile Glu Gly Ile	Phe Phe Val Ser Ser	Phe Ala Ala Ile Ala	
8300	8305	8310	
tat tta cgc aat aac	gga cta ttt gtt gta	act tgt caa ttt aac	98949
Tyr Leu Arg Asn Asn	Gly Leu Phe Val Val	Thr Cys Gln Phe Asn	
8315	8320	8325	
gac ctt ata agc cga	gat gaa gcc ata cat	acc agc gca tcg tgt	98994
Asp Leu Ile Ser Arg	Asp Glu Ala Ile His	Thr Ser Ala Ser Cys	
8330	8335	8340	
tgt ata tac aat aac	tat gta ccc gaa aaa	ccc gct atc acc aga	99039
Cys Ile Tyr Asn Asn	Tyr Val Pro Glu Lys	Pro Ala Ile Thr Arg	
8345	8350	8355	
ata cat caa ctg ttt	tcg gaa gcc gtt gaa	atc gag tgt gcg ttt	99084
Ile His Gln Leu Phe	Ser Glu Ala Val Glu	Ile Glu Cys Ala Phe	
8360	8365	8370	
tta aaa tcc cat gca	ccc aaa acc cgt ttg	gtg aac gtc gat gca	99129
Leu Lys Ser His Ala	Pro Lys Thr Arg Leu	Val Asn Val Asp Ala	
8375	8380	8385	

att aca caa tac gtg	aaa ttc agc gcg gac	agg ctt tta tca gcg	99174
Ile Thr Gln Tyr Val	Lys Phe Ser Ala Asp	Arg Leu Leu Ser Ala	
8390	8395	8400	
att aat gta cca aaa	cta ttt aac acc cca	cct ccc gat tcg gac	99219
Ile Asn Val Pro Lys	Leu Phe Asn Thr Pro	Pro Pro Asp Ser Asp	
8405	8410	8415	
ttt cca ctt gca ttt	atg att gca gat aaa	aac aca aat ttt ttt	99264
Phe Pro Leu Ala Phe	Met Ile Ala Asp Lys	Asn Thr Asn Phe Phe	
8420	8425	8430	
gag aga cac agt aca	tct tat gcg ggc aca	gtg ata aac gat tta	99309
Glu Arg His Ser Thr	Ser Tyr Ala Gly Thr	Val Ile Asn Asp Leu	
8435	8440	8445	
taa catgtatata cgagcaaaat aaaacaatga accattaagt cgctcttatg			99362
tgtgttttaa ttccaatatt ttgttaatac agtgtttagt gggagtggag taggaataaa			99422
ctgttttaaaa atacgtgcgt attggcgagc ctttttttcc ccctttaagt tatgatataa			99482
gggtgttaata accatatatg ggtctgccgt attttgcata atatttacac gtttcattaa			99542
ctttaggcga ccgcgggtca atggagttac cacggcgatt atatgttcaa caaatgcgcg			99602
ttccaaatta tccaatgggg aggatgaggg tggcagaagg tttaaagccc aactggcgtc			99662
tactgtcacc tccgatcggg tagatgcata tttggaaacg gacactccgt tttctgtttt			99722
acccgacgtg gctacggtaa gacttttgaa aacctcgcca tgtctccacg agtcgtaagt			99782
gggggagcgc gttgaagtgt ccatttgatg tggaactttc aggccggtat cctgaataac			99842
ttgctgaaca gatttttaggt tgtcacttgt atgcaaactc gtctgacagc gaacaaaggc			99902
aaccaaaaat tcagggtatg taattcctaa atattgaagc aaatcgcgac atcgtactac			99962
tggagcaaac ataggaattg catctaacia aatatcacag cccatgaaga gttaatcagt			100022
atctgtcgta taaaccaag ccactgtacg cgtatgaaat aagtttgcac atgcctcgtc			100082
cgctcaatg tcaaccgcct cgacgtatgc ataccccatc catctaataa gacttgcaca			100142
caatttgtga tataatcgat ggtaggatg tcctcgggat ggcattgtag aggtaagact			100202
gcatacgttt tggtcgcgca ggcagatcgt cttgtcagtt tgctgtggac aaccgtccaa			100262
aaacatatcc tgggatttgt tttcttcgct aggaatacaa ctctgtggaag agtttcgaaa			100322
cacactgtca tatgtttccg atgttttggt atacttgata gaacatgatg tggttgatga			100382
tagtagaaca cgggttaagt ccgaggttcc cttttcatcg tggttcatgg cccgtgacat			100442
aattgccttg gctccacgtg ataatgggcc gtctgtacaa cgttccaata caaatatcgg			100502
atagtatgac cgttgtgtta atagccgcaa taagactcca agacaatgta tcgttacaga			100562
tggtcctgtg aaattctcgc gtttaccac agggtataaa cgttccaaca atgtgtacat			100622

gacgttccat acgtctaccg ccacgggggt taaaactccg ggtggcgttg aaatgatgct 100682
gggtttaacc agtttatgtt catggataaa gcgtgtcagt ccaaagagcc ccatcaatac 100742
acttaaccaa gtttatatcg tcttgtgaaa ggtttcacag cggcttcagt aattcttcga 100802
tgtgatcttg tgtaattac agacgtatat aatgatgtac atatttttta tgacaaacat 100862
tacatcaaät ctggtaactt cttacgtatt ttattgcaca gtccctatta aggaacaccc 100922
cctgtattgg aacacgtgga aatgttccct cccatggggc gtactattca aatatcatgc 100982
ctgtttatgt acttaagtca ccggatcggg ttaaacaac atattaacga aactcgtgtg 101042
tttacatatg attacttttt ctatagtaaa cattttaagt agtaaatt atg gat ttg 101099
Met Asp Leu

agg tcg cgt aca gac gat gct ttg gac atg gaa ttg cat gcg ggt 101144
Arg Ser Arg Thr Asp Asp Ala Leu Asp Met Glu Leu His Ala Gly
8450 8455 8460

ttt gac gcc cca gaa atc gcc aga gct gtt tta acg gaa aaa acg 101189
Phe Asp Ala Pro Glu Ile Ala Arg Ala Val Leu Thr Glu Lys Thr
8465 8470 8475

ctt act ggt tta att tcg tct ata tca cct ctg gtt aat aga cta 101234
Leu Thr Gly Leu Ile Ser Ser Ile Ser Pro Leu Val Asn Arg Leu
8480 8485 8490

agg gat tct att tta ata ttc agc gac gaa gga tta att att cac 101279
Arg Asp Ser Ile Leu Ile Phe Ser Asp Glu Gly Leu Ile Ile His
8495 8500 8505

tgt agt ttg gaa aca gaa caa ctg tat att cct ata ccg gca aat 101324
Cys Ser Leu Glu Thr Glu Gln Leu Tyr Ile Pro Ile Pro Ala Asn
8510 8515 8520

atg ttt gac cag tat aat tgg act ggg ccg aga atg gtt gta ctc 101369
Met Phe Asp Gln Tyr Asn Trp Thr Gly Pro Arg Met Val Val Leu
8525 8530 8535

gcg gca acg gag gga cgg tcc tcg ctt att gac gcg ttt cgc cat 101414
Ala Ala Thr Glu Gly Arg Ser Ser Leu Ile Asp Ala Phe Arg His
8540 8545 8550

aca aaa gat ccg tcg acc cca aca cgg tta tat ttt aaa ttt acc 101459
Thr Lys Asp Pro Ser Thr Pro Thr Arg Leu Tyr Phe Lys Phe Thr
8555 8560 8565

gga caa ccc ccc gag cgg agt att atc caa acg atg gta tgg caa 101504
Gly Gln Pro Pro Glu Arg Ser Ile Ile Gln Thr Met Val Trp Gln
8570 8575 8580

cgc ccg ggt gat tgt ggt cca gat gat caa gta caa tgt tac aaa 101549
Arg Pro Gly Asp Cys Gly Pro Asp Asp Gln Val Gln Cys Tyr Lys
8585 8590 8595

caa gtt gta aaa cgt gaa ctc gct tgt tat aca atg atg ttt cca 101594
Gln Val Val Lys Arg Glu Leu Ala Cys Tyr Thr Met Met Phe Pro

8600	8605	8610	
aat cta act cca gat ata agc att tgc tta aaa cgc gat caa ttc 101639	Asn Leu Thr Pro Asp Ile Ser Ile Cys Leu Lys Arg Asp Gln Phe		
8615	8620	8625	
acc cgt tta cag cga cta ctt aaa act ttt ggg ttt aca aca tgc 101684	Thr Arg Leu Gln Arg Leu Leu Lys Thr Phe Gly Phe Thr Thr Cys		
8630	8635	8640	
ttc att cta aca gcc acg gat atg tac atc cag acc gcc ggg ggt 101729	Phe Ile Leu Thr Ala Thr Asp Met Tyr Ile Gln Thr Ala Gly Gly		
8645	8650	8655	
ggg ttt atc tca ttt aat gtt tcc ttg gat ata aac gga agc aag 101774	Gly Phe Ile Ser Phe Asn Val Ser Leu Asp Ile Asn Gly Ser Lys		
8660	8665	8670	
cct aca cca tat aat tta ata cgc tca atc aca aat tca aaa agg 101819	Pro Thr Pro Tyr Asn Leu Ile Arg Ser Ile Thr Asn Ser Lys Arg		
8675	8680	8685	
atc ctt aat aat gtt gtt tat ggc agc ggg agt atg cgt gaa ttt 101864	Ile Leu Asn Asn Val Val Tyr Gly Ser Gly Ser Met Arg Glu Phe		
8690	8695	8700	
gga gta tta ttg gaa aca cac agt gga ttc cgt tct gcc gta caa 101909	Gly Val Leu Leu Glu Thr His Ser Gly Phe Arg Ser Ala Val Gln		
8705	8710	8715	
aat ctt aag tta aca cgg gat gag acg tgt tat att aat ttt tat 101954	Asn Leu Lys Leu Thr Arg Asp Glu Thr Cys Tyr Ile Asn Phe Tyr		
8720	8725	8730	
ctc gcc tta act aac tcc ccc atg gtt gga ttg tat atc caa cgt 101999	Leu Ala Leu Thr Asn Ser Pro Met Val Gly Leu Tyr Ile Gln Arg		
8735	8740	8745	
tcc gca ccc gtg cat tct ttt ttt tat gca acg ttc tta agt ccc 102044	Ser Ala Pro Val His Ser Phe Phe Tyr Ala Thr Phe Leu Ser Pro		
8750	8755	8760	
aaa gac ctt aaa gaa aaa tta acc tcg atg caa tta ttt gcg aac 102089	Lys Asp Leu Lys Glu Lys Leu Thr Ser Met Gln Leu Phe Ala Asn		
8765	8770	8775	
atg gaa tct gtg aag gat gaa cca cca tta aaa aaa aga cgc aat 102134	Met Glu Ser Val Lys Asp Glu Pro Pro Leu Lys Lys Arg Arg Asn		
8780	8785	8790	
tta tta aca aaa aga aac gaa aaa aat acc gga aat aaa atg ggg 102179	Leu Leu Thr Lys Arg Asn Glu Lys Asn Thr Gly Asn Lys Met Gly		
8795	8800	8805	
ggg aaa ctc ccc gaa acc aca tgg cag gag gga atc gga att cgc 102224	Gly Lys Leu Pro Glu Thr Thr Trp Gln Glu Gly Ile Gly Ile Arg		
8810	8815	8820	
gaa tat tgt gtg gct cct cca gtg gac cct gca gga acc ctg gat 102269	Glu Tyr Cys Val Ala Pro Pro Val Asp Pro Ala Gly Thr Leu Asp		

8825	8830	8835	
tat tct gaa tta tca cgt gaa tct gac gta ata tgt aca gtt aaa			102314
Tyr Ser Glu Leu Ser Arg Glu Ser Asp Val Ile Cys Thr Val Lys			
8840	8845	8850	
taa gtgcaacttt tgcttatatt ttacatacaa acttgtgtgt accatagatg			102367
aacacatttt tatttgtttt gaattattaa acttaagac atg gcc gtg aat ggt			102421
		Met Ala Val Asn Gly	
		8855	
gaa aga gct gtc cat gat gaa aac ctg ggt gtg tta gac aga gaa			102466
Glu Arg Ala Val His Asp Glu Asn Leu Gly Val Leu Asp Arg Glu			
8860	8865	8870	
tta atc cgc gct caa tca atc caa gga tgt gtc gga aac cct caa			102511
Leu Ile Arg Ala Gln Ser Ile Gln Gly Cys Val Gly Asn Pro Gln			
8875	8880	8885	
gaa tgt aat tcg tgt gca ata acc tca gca tcg cgg ttg ttt ctc			102556
Glu Cys Asn Ser Cys Ala Ile Thr Ser Ala Ser Arg Leu Phe Leu			
8890	8895	8900	
gtg gga cta caa gca agc gtt atc acg tcc ggg tta att tta caa			102601
Val Gly Leu Gln Ala Ser Val Ile Thr Ser Gly Leu Ile Leu Gln			
8905	8910	8915	
tat cac gtc tgc gaa gct gcc gtc aat gca act att atg ggg ttg			102646
Tyr His Val Cys Glu Ala Ala Val Asn Ala Thr Ile Met Gly Leu			
8920	8925	8930	
atc gtc gtt tcg ggg tta tgg cca aca tcc gtg aaa ttt cta cgc			102691
Ile Val Val Ser Gly Leu Trp Pro Thr Ser Val Lys Phe Leu Arg			
8935	8940	8945	
aca tta gca aaa ttg gga cga tgt ttg cag acg gtg gtc gtg ttg			102736
Thr Leu Ala Lys Leu Gly Arg Cys Leu Gln Thr Val Val Val Leu			
8950	8955	8960	
ggg ttt gct gtg tta tgg gcg gtt ggt tgc cca ata tcc cgg gat			102781
Gly Phe Ala Val Leu Trp Ala Val Gly Cys Pro Ile Ser Arg Asp			
8965	8970	8975	
ctt cca ttt gta gaa tta ctg gga att tcc ata tcc gcg att acc			102826
Leu Pro Phe Val Glu Leu Leu Gly Ile Ser Ile Ser Ala Ile Thr			
8980	8985	8990	
gga aca gtg gct gct gtg cat atc cat tac tac aac ttt gtt acg			102871
Gly Thr Val Ala Ala Val His Ile His Tyr Tyr Asn Phe Val Thr			
8995	9000	9005	
aca ttc aat gga ccg cat att tat ttt tat gtt atg atg ttg gga			102916
Thr Phe Asn Gly Pro His Ile Tyr Phe Tyr Val Met Met Leu Gly			
9010	9015	9020	
act ggg ttg gga ggt tta cta acc gtt att tta tat atg tat gtc			102961
Thr Gly Leu Gly Gly Leu Leu Thr Val Ile Leu Tyr Met Tyr Val			
9025	9030	9035	

agt	aaa	tat	gag	gtt	ctt	att	gga	ttg	tgt	ata	tct	att	gtc	aca	103006
Ser	Lys	Tyr	Glu	Val	Leu	Ile	Gly	Leu	Cys	Ile	Ser	Ile	Val	Thr	
	9040					9045					9050				
cta	gtt	tca	att	gtc	gat	gcc	gcc	acc	gat	ttg	caa	gat	acg	tgt	103051
Leu	Val	Ser	Ile	Val	Asp	Ala	Ala	Thr	Asp	Leu	Gln	Asp	Thr	Cys	
	9055					9060					9065				
ata	tat	cgt	aaa	aat	cgc	cat	aag	caa	tta	aac	act	tat	aca	gat	103096
Ile	Tyr	Arg	Lys	Asn	Arg	His	Lys	Gln	Leu	Asn	Thr	Tyr	Thr	Asp	
	9070					9075					9080				
tta	ggg	ttt	gcc	gtt	gta	tat	aca	caa	aat	gac	cgc	ggg	aga	gta	103141
Leu	Gly	Phe	Ala	Val	Val	Tyr	Thr	Gln	Asn	Asp	Arg	Gly	Arg	Val	
	9085					9090					9095				
tgt	gac	cat	cga	gaa	agt	tcc	cgg	acc	ctt	aaa	cgc	gtg	ttt	aaa	103186
Cys	Asp	His	Arg	Glu	Ser	Ser	Arg	Thr	Leu	Lys	Arg	Val	Phe	Lys	
	9100					9105					9110				
gga	att	cgt	ata	atg	tct	gtt	ata	ccc	ccg	gtg	tta	tat	ata	gtt	103231
Gly	Ile	Arg	Ile	Met	Ser	Val	Ile	Pro	Pro	Val	Leu	Tyr	Ile	Val	
	9115					9120					9125				
acc	cca	tta	atg	tgg	gca	atc	tca	cat	ata	att	aaa	tta	aat	cat	103276
Thr	Pro	Leu	Met	Trp	Ala	Ile	Ser	His	Ile	Ile	Lys	Leu	Asn	His	
	9130					9135					9140				
ttt	atc	aaa	ctt	aca	caa	gta	acg	tta	gca	gtt	tca	ata	gga	ggg	103321
Phe	Ile	Lys	Leu	Thr	Gln	Val	Thr	Leu	Ala	Val	Ser	Ile	Gly	Gly	
	9145					9150					9155				
cat	att	ata	gca	ttt	ggg	tta	cag	ggg	ttt	gcc	gtt	tta	tat	caa	103366
His	Ile	Ile	Ala	Phe	Gly	Leu	Gln	Gly	Phe	Ala	Val	Leu	Tyr	Gln	
	9160					9165					9170				
gaa	aaa	aaa	aac	cta	tgg	gta	att	gta	tta	tat	aca	acg	acc	tcg	103411
Glu	Lys	Lys	Asn	Leu	Trp	Val	Ile	Val	Leu	Tyr	Thr	Thr	Thr	Ser	
	9175					9180					9185				
gtg	acg	ggg	ata	gct	gta	aca	ttt	gcc	ggc	att	tca	tgg	gga	gct	103456
Val	Thr	Gly	Ile	Ala	Val	Thr	Phe	Ala	Gly	Ile	Ser	Trp	Gly	Ala	
	9190					9195					9200				
att	ata	att	cta	aca	tca	aca	gtt	gcg	gcg	ggg	ttg	acg	tgt	att	103501
Ile	Ile	Ile	Leu	Thr	Ser	Thr	Val	Ala	Ala	Gly	Leu	Thr	Cys	Ile	
	9205					9210					9215				
cag	atg	atg	aga	cta	agc	gtt	aaa	cct	att	gac	tgt	ttt	atg	gca	103546
Gln	Met	Met	Arg	Leu	Ser	Val	Lys	Pro	Ile	Asp	Cys	Phe	Met	Ala	
	9220					9225					9230				
tct	cat	atc	act	aaa	gta	tat	cac	gtg	tgt	gtt	tat	att	ata	ata	103591
Ser	His	Ile	Thr	Lys	Val	Tyr	His	Val	Cys	Val	Tyr	Ile	Ile	Ile	
	9235					9240					9245				
aat	cta	tgc	tat	cta	tgt	ggg	aca	tat	gta	tcg	taa	tcgagataaaa			103637
Asn	Leu	Cys	Tyr	Leu	Cys	Gly	Thr	Tyr	Val	Ser					
	9250					9255									

taaagttttt aaagttgcaa aagccgtttt tattattccc aatgtcgaaa aaaacgtttc 103697
 catcatttaa attccgcggt ggggtgtttta atcttttatt taaggggagc gtggatgtgt 103757
 caataaaaac cagg atg aag cgg ata caa ata aat tta att tta acg 103804
 Met Lys Arg Ile Gln Ile Asn Leu Ile Leu Thr
 9260 9265 9270
 atc gcg tgt ata caa tta tcg act gaa tct caa ccc aca ccc gta 103849
 Ile Ala Cys Ile Gln Leu Ser Thr Glu Ser Gln Pro Thr Pro Val
 9275 9280 9285
 agt ata act gaa tta tat acc tcg gcc gct acc cga aag ccc gat 103894
 Ser Ile Thr Glu Leu Tyr Thr Ser Ala Ala Thr Arg Lys Pro Asp
 9290 9295 9300
 ccc gcc gtc gcg ccc acc tcg gcc gct tcc cga aag ccc gat ccc 103939
 Pro Ala Val Ala Pro Thr Ser Ala Ala Ser Arg Lys Pro Asp Pro
 9305 9310 9315
 gcc gtc gcg ccc acc tcg gcc gct tcc cga aag ccc gat ccc gcc 103984
 Ala Val Ala Pro Thr Ser Ala Ala Ser Arg Lys Pro Asp Pro Ala
 9320 9325 9330
 gtc gcg ccc acc tcg gcc gct tcc cga aag ccc gat ccc gcc gtc 104029
 Val Ala Pro Thr Ser Ala Ala Ser Arg Lys Pro Asp Pro Ala Val
 9335 9340 9345
 gcg ccc acc tcg gcc gct acc cga aag ccc gat ccc gcc gtc gcg 104074
 Ala Pro Thr Ser Ala Ala Thr Arg Lys Pro Asp Pro Ala Val Ala
 9350 9355 9360
 ccc acc tcg gcc gct tcc cga aag ccc gat ccc gcc gtc gcg ccc 104119
 Pro Thr Ser Ala Ala Ser Arg Lys Pro Asp Pro Ala Val Ala Pro
 9365 9370 9375
 acc tcg gcc gct acc cga aag ccc gat ccc gcc gtc gcg ccc acc 104164
 Thr Ser Ala Ala Thr Arg Lys Pro Asp Pro Ala Val Ala Pro Thr
 9380 9385 9390
 tcg gcc gct tcc cga aag ccc gat ccc gca gcc aac acc caa cat 104209
 Ser Ala Ala Ser Arg Lys Pro Asp Pro Ala Ala Asn Thr Gln His
 9395 9400 9405
 tca caa cca cct ttt cta tat gaa aat ata caa tgc gtt cac ggc 104254
 Ser Gln Pro Pro Phe Leu Tyr Glu Asn Ile Gln Cys Val His Gly
 9410 9415 9420
 gga ata caa tcc ata ccc tat ttt cac aca ttt atc atg cct tgt 104299
 Gly Ile Gln Ser Ile Pro Tyr Phe His Thr Phe Ile Met Pro Cys
 9425 9430 9435
 tac atg cgt cta acg acc gga caa cag gcg gcc ttt aag cag caa 104344
 Tyr Met Arg Leu Thr Thr Gly Gln Gln Ala Ala Phe Lys Gln Gln
 9440 9445 9450
 caa aaa aca tat gaa caa tat tct tta gat ccg gaa ggt tca aat 104389
 Gln Lys Thr Tyr Glu Gln Tyr Ser Leu Asp Pro Glu Gly Ser Asn
 9455 9460 9465

ata aca agg tgg aag	tcg ctt ata cgc ccc	gat ctt cat att gaa	104434
Ile Thr Arg Trp Lys	Ser Leu Ile Arg Pro	Asp Leu His Ile Glu	
9470	9475	9480	
gtt tgg ttt acg cgt	cac ctt ata gat ccg	cac cgt caa ctg ggc	104479
Val Trp Phe Thr Arg	His Leu Ile Asp Pro	His Arg Gln Leu Gly	
9485	9490	9495	
aat gcg tta ata cgc	atg cca gat tta ccg	gtt atg tta tat agc	104524
Asn Ala Leu Ile Arg	Met Pro Asp Leu Pro	Val Met Leu Tyr Ser	
9500	9505	9510	
aac agt gcc gat tta	aac tta ata aac aac	cct gag ata ttt aca	104569
Asn Ser Ala Asp Leu	Asn Leu Ile Asn Asn	Pro Glu Ile Phe Thr	
9515	9520	9525	
cac gct aag gaa aat	tat gta ata cca gat	gtt aaa aca acg tct	104614
His Ala Lys Glu Asn	Tyr Val Ile Pro Asp	Val Lys Thr Thr Ser	
9530	9535	9540	
gat ttt tct gta aca	att tta tct atg gat	gct acc acg gag gga	104659
Asp Phe Ser Val Thr	Ile Leu Ser Met Asp	Ala Thr Thr Glu Gly	
9545	9550	9555	
acg tat att tgg cga	gtc gtt aat aca aaa	act aag aac gtc ata	104704
Thr Tyr Ile Trp Arg	Val Val Asn Thr Lys	Thr Lys Asn Val Ile	
9560	9565	9570	
tcg gaa cac agt att	aca gtt aca acg tat	tat cgt cca aat att	104749
Ser Glu His Ser Ile	Thr Val Thr Thr Tyr	Tyr Arg Pro Asn Ile	
9575	9580	9585	
acc gtt gtc ggc gat	cca gtc tta acc gga	cag aca tac gca gcc	104794
Thr Val Val Gly Asp	Pro Val Leu Thr Gly	Gln Thr Tyr Ala Ala	
9590	9595	9600	
tac tgt aac gta tca	aag tat tat cca ccg	cac tcg gta cgt gtt	104839
Tyr Cys Asn Val Ser	Lys Tyr Tyr Pro Pro	His Ser Val Arg Val	
9605	9610	9615	
cgg tgg act tca agg	ttt ggt aac atc gga	aaa aat ttt ata acc	104884
Arg Trp Thr Ser Arg	Phe Gly Asn Ile Gly	Lys Asn Phe Ile Thr	
9620	9625	9630	
gat gca ata caa gaa	tat gcc aat gga tta	ttt agt tat gtt tcg	104929
Asp Ala Ile Gln Glu	Tyr Ala Asn Gly Leu	Phe Ser Tyr Val Ser	
9635	9640	9645	
gcg gta cga att cca	cag caa aaa caa atg	gat tac cca ccc cca	104974
Ala Val Arg Ile Pro	Gln Gln Lys Gln Met	Asp Tyr Pro Pro Pro	
9650	9655	9660	
gcc atc caa tgt aat	gtt tta tgg att cgg	gat ggc gtc tct aat	105019
Ala Ile Gln Cys Asn	Val Leu Trp Ile Arg	Asp Gly Val Ser Asn	
9665	9670	9675	
atg aaa tat tct gct	gtc gtt acc cct gac	gtc tat cca ttt ccc	105064
Met Lys Tyr Ser Ala	Val Val Thr Pro Asp	Val Tyr Pro Phe Pro	
9680	9685	9690	

aac gtg tct ata ggt att att gat gga cac ata gta tgt acg gca	105109
Asn Val Ser Ile Gly Ile Ile Asp Gly His Ile Val Cys Thr Ala	
9695 9700 9705	
aaa tgt gtg cca cgt ggc gtt gta cat ttc gta tgg tgg gtt aac	105154
Lys Cys Val Pro Arg Gly Val Val His Phe Val Trp Trp Val Asn	
9710 9715 9720	
gat tct ccc att aac cac gaa aac agt gag att act ggg gtg tgt	105199
Asp Ser Pro Ile Asn His Glu Asn Ser Glu Ile Thr Gly Val Cys	
9725 9730 9735	
gat caa aac aaa cgg ttt gta aac atg caa agt tct tgt cca aca	105244
Asp Gln Asn Lys Arg Phe Val Asn Met Gln Ser Ser Cys Pro Thr	
9740 9745 9750	
tcg gaa ctc gac gga cct atc acc tat tcg tgt cat cta gat ggt	105289
Ser Glu Leu Asp Gly Pro Ile Thr Tyr Ser Cys His Leu Asp Gly	
9755 9760 9765	
tac cct aaa aaa ttc cct ccg ttt tcg gcc gtt tat acc tac gat	105334
Tyr Pro Lys Lys Phe Pro Pro Phe Ser Ala Val Tyr Thr Tyr Asp	
9770 9775 9780	
gca tct acc tac gcc act aca ttt tcc gtt gta gca gtt ata att	105379
Ala Ser Thr Tyr Ala Thr Thr Phe Ser Val Val Ala Val Ile Ile	
9785 9790 9795	
ggg gtg ata tct atc ctt ggg aca ttg ggt ctt atc gca gtt atc	105424
Gly Val Ile Ser Ile Leu Gly Thr Leu Gly Leu Ile Ala Val Ile	
9800 9805 9810	
gca acc cta tgc atc cgt tgc tgt tca taa acagaaacca accaaacgcg	105474
Ala Thr Leu Cys Ile Arg Cys Cys Ser	
9815	
tctgtgtata tcattttatt acattcgcaa cacatctact gtcttgacaa catttaaaaa	105534
tccattaaag agccatttcc atttttaggg ggggggtgtgg attatatcca tcaagctgaa	105594
aatcgtccca tttaaagtcg tttatatctg ttacatttctg aataatttta aggcaaggaa	105654
aagggttttg ggatcgagct agctgcactt ttaaagcatc tatatgattc aagtaaatat	105714
gtgcatcccc cattgtatga attaaatctc cggttttaag tcctgtaaca tgcgctacta	105774
tgtaggtaag aagtgcataat ccagcaatgt tgaacgggtac cccaaggccc atatcccccg	105834
atctctggta tacttggcag gataattcac cgtttgcaac gtaaaactga cataacgtgt	105894
gacatggagg tagtaccatt aaggggatat cctttggatt ccaagacgat ataatcattc	105954
gtcggctttc tgggtttgtt ttaattgtat ctataacagt ttgcagctga tcgattcctt	106014
gctgtaaata gtttgattga cagtctttat attccgctcc aaaatgtctc cactggaagc	106074
cgtaaatggg gccaaagggtcc cccgtgtgtc ttttatggaa gccattccta tttagaaatt	106134
tgctcgatcc gtatatatcc catatgtgta tatcttttagc ggcgagttct ttggaatcgg	106194

ttgacccgcg gataaaccat aacaactctt ccacgacggc cctccaaaaa acacgctttg 106254
 tagttaaag aggaaattca tttcgcaaat tgtatcgagc ttgcattcca aataaagata 106314
 acgttccgat tcctgttcga tcgcgtttcc gaactccata ccttaaaata tcatccactt 106374
 gttttaagta ctgaagttcg ccggttaacg taaaacccgg cacctttgtc caacatgaca 106434
 agtctcccat ggtaccggta ataatcgta aatacaaacg accacttgat attgtgggta 106494
 cattaagtaa aatttaaagg agtaattcct tttataaccc aatcaaccaa tcagaccttt 106554
 aaataacgca gtccaattat tgaacagaaa atacgcaata gactattttc tcccaaattc 106614
 cccaatttta acctgggtgt ggaaatgacc gccaaagtgc ctagtccata actatctatt 106674
 aaccgctgta cttaatgatg actcttaggc gtatttttcc taaacgtaac cgtgggtttta 106734
 catctaacgg gaacgtcgtt ggggtataaaa tctggtgata agtcatcgtc tgtatgcatg 106794
 tctccggagg tgtacccgtt aaggctatcc acatccaggt ctgaagatga gttaaaaccc 106854
 acttccttgg gtggtatatt ttcataatcg tgatcattta aagatgcttg ggtttctatg 106914
 tgacgtaaatt ccgatctttg gtcaaacatt gtgtttgatt catcccgaac cggaccttca 106974
 tattccgcct ttatccgggt gtaatgatca ggatacgttg ggtcaactgg actaccgtcc 107034
 gtatggccta tgtccagaca gtgggtttttt cggacagtta catccaaacc cgtgtctgga 107094
 cgaactaaaa cgcgagaagt ccgctgtcta tttgtatcgg gtgctatact gtttaacggg 107154
 gcttctgtat taattacatg cgaacttgca tttacgtcgt cagataaata atttcccgtt 107214
 aaacagacac attccaaatt ccctatacct gtccctattg gagatcccag tcgattaaaa 107274
 cgaatatacg gctgatcaga cacactcgat ggttcggata tacgtcttaa atgtaacgga 107334
 gtataccgtt tactggcggc aagaacctga gcataatact ttgtgggttt acccccatgt 107394
 gctaaaatac tctgcgccac ggcccgggaa aaccacatat gggtgctggg ctctaacaca 107454
 acccaactgt gtgttgacat tgttctgacc aactgacccg caaaatataa aaaccgtccc 107514
 tgggcacgta gcgcctttta tatataagga tcgtttaatc ccccatcccc ccaacatgca 107574
 tatccaataa gcatcatatt aattaagtat tgaaaatggg ggtgcaaaag cgtaataagt 107634
 tcaaccgccg caacaattgc agctgcgggt ccatttaaac catcccgcca ctcttccttt 107694
 cgccataata cactaatag caaaagcgca gtaagagcgc tggcagttgt tgctgctaaa 107754
 ataaacgcaa ctctgtgcc cgctgagacc gcaggacccg tttttaaatg tcgtctaagc 107814
 aaatcatctg gaataacaga cgcgcgcggc cctcgaatcc gtcgaaattg aagtttgaga 107874
 tggcgacata ccctggcgtc cacaacgtcc aagaaccata acatccaccc gtagccagta 107934
 gccgtgtaag ccgcaatttc ttgtacacgt attcttgtat ccgggctggg gtttgtagga 107994

tcatctggac gcataaaata catatacttt tgcacagctc ctaacgcctc acgtagctcc 108054
 tgacatattc cccggtaatc cgaatttata acttttagatt taaaaggatg tctggatatt 108114
 ggtttattgg caactacgga tgaaaacaac aaaaccgtgg atttagactt tttatttacc 108174
 ttctctgaag tcaccggtac ctccggctcct gtggtgtatt tgagatactg ccaatatgta 108234
 ttttcataaa cccaccaaag tccatcccca gaaagtttca ggtcatccaa acatctttga 108294
 attgtttcca tataacgctg cataaaccgg tcatgaacat cgtagacat acacgagacc 108354
 accaacgatt caggaacatt attatgggtg aatccaagca gaacactgtg tctttcggta 108414
 ctttgtaaaa ccggcgatgt taggctgtcg gtcttttcag ataaagcctt taccgccgtc 108474
 tccaaagcct cgccggggtg tggaataaga catccatccc tcacgcgctc gctgggttatg 108534
 cgttgggaaa tagaacacca gtcccgggta ggtgtgggca aatcacgttc gccggcatta 108594
 aaactttggg aactaccatc ataagattta cgcgttctat catcgctgga aaaggaacgc 108654
 gcaaaccgag aaaacattgc gatatggaca aattatatct tgtaaagggtc gatcctcacg 108714
 gacccccac acaacacaca caacaaattt taaggctctaa acagagattt tattttacaa 108774
 actcctttgt ggggtgtggct aggaaacgtt cttttcatcc taatgaaaaa aatcacaacc 108834
 cttaatattt tcgtagtaaa tgcattggctc cgcttttcca atccaaaccc agaatttcat 108894
 tcctgtattg cataagattt tcggctaggt ccacggaggg aatgggctgt tctcggggat 108954
 agatggtctc caatcccaca aaacggaagt tcatctctat aggtgatgcc tgaactatcc 109014
 tgtcttgctc tttgggtaaa acgtccgttg tcggtcgaat ccccaaagtt tgcattgcat 109074
 catcgcggtc tttccaaaag gatgttaaag tttgggtgagc gtaaagagga cttgctgcca 109134
 acattaaagt attatatgca tctaaaatac ctccggggat gtaaattgaa catcctccgt 109194
 acaacgcagc accggagaga agcaacaaaa gaagatttgc atgaccaac acccggttga 109254
 acaataaaac ggccccagc tacgcgctta ccattaaatc ggtctcactt tccttataac 109314
 aatcggcaaa ctctatcata aaatttgtgg ctgctgtgcg aacagcctca tatccggtta 109374
 attcgtgtgc aatagttgcg taggattcac aaacagttgg gaggtcgacc tcgcctaaca 109434
 gtaatacctc taaatcacat aacagggtcac tattaaccgg gatatagtaa tagggcagag 109494
 attcacagac cgcgatgtaa gccgaacggg aatggtaagg agcagctaaa tacattgcag 109554
 ttgctctaca gatccagttc aacattcctc caccaagagt aacatacaac gtaaaaaatg 109614
 acgctaacat ttcccgttcc gttggggtaa attgtggctt taaactatgt gtacgtgaaa 109674
 ataaaaacca ttcggcaagt tccatgtgac cggtagcata tcgcaccaa gatgtagatg 109734
 gttcacttat agcaattctt agttcggggc aatatgccaa cgccccaaaa aaaccacgca 109794

taatggcaac cggttgaccc cgatttggca aaaccaactg tgtcacttgg agtacgtcgg 109854
 gtacggcttc tcgtggtaat ccggcaagat ggtcttctaa ccaacatgga tccccacgc 109914
 caaaattatc gttacgtccc aaaaaaatac agtttgcgct aatacgaatt gccgcgtcta 109974
 acaaaaatcc taatccatct ccatgtgaaa tgcgattaga aatagcgcgt gctgctgtgg 110034
 ataatatcat gtgatgccaa atggccgctt cttggccccc agcacgtaag gacacgtcat 110094
 aaaacccagg aatgtgttgt acatacattt taccgcgcat atatggaagt gcgtagacgg 110154
 aattccaacg cgggcccgtat ttatgtgttt tactggaagc ccgcctatct aaaaatacat 110214
 cttcaactaa aatacgttct atagaaattg gctggggccat aaattcaata ggaaaaatca 110274
 ataaaagttc accaagtgtc atgttaggaa gggctgggtat agttctcaaa atctgtgggg 110334
 gtgtcatccg ggaagtatca aactgatacc gtaaatgaat tgggtcgtat aatccttgga 110394
 ccgtaatata ttcgcgacgg gtacattcgc gcatagcaaa ccaggactca tcaaaccat 110454
 tatgcgctaa catagagcct gttagggtaa caggttcaac acaacgtttt gatacattaa 110514
 gttcctttga taccgcaggc tccataacct ttgcaatgcg aagatcggta ctgtaactta 110574
 tttccgggtc taacgtaaaa taaacctcat ccgcgtctcg actgcaaact tgacttacag 110634
 aaaaataatc ctctccgcc tctccctcgt cgtcgatcgc gtcctcctcc gccgcgtcct 110694
 cctccgcctc tccctcgtcg tcgatcgcgt cctcctccgc ctctccctcc tccgcctctc 110754
 cctcctccgc ctctccctcc tccgcctctc cctcgtcgtc aatcgcgtcc tctcgcct 110814
 ctccctcctc cgctctccc tcgtcgtcaa tcgcgtcctc ctccgcctct cctcctcctc 110874
 cctctccctc gtcgtcgatc gcgtcctcct ccgcctctcc ctctccgcc tctccctcgt 110934
 cgtcgatcgc gtccgtattg atgttgattt cctcattagc ttccctctcc gttaatTTAA 110994
 atatgcgatt ttcatgtctg gaagttgatg tattttgttc ggatccatta tatgtagaat 111054
 gatgtaaggc gtatcccgga aaatcatccg atgcgtcaga actgctgtcc tgatccatct 111114
 cggagttcag tagttcttga accgcaacta atgtttctga attggacaat atctgggggtg 111174
 ggtgtgtata ccaattgggt gaccgataac gtgttccgtg tgtgtgacgg ggggagtctg 111234
 tggattaga cgatatccgc tgcggcggg attgcctccg gttataatga cccgactgca 111294
 tacttataac cgagacaaac aaacgcgcct gtaaaacatc ccagggtcgc ggtacgcaat 111354
 acgcatacac tcgttggggc ttcttttata tatgggactt tagagcacat gacagacata 111414
 ccatatacgg cgcattgtaa aaataaaaaa cgcatgcacg ttttcgtaat ttatttacac 111474
 cctctacccc aatgacgttt aacgcgttaa aaaccacac gtgggtgggc gtgggtgggtc 111534
 ccccggcagg atctcggatg gggacggagg tgctaaaatc atagcttcga tgctactacc 111594

gtagtttcta ttttcaacaa cttttgcgta aggatgatcc gctcgtacat gtctcggttc 111654
 ttgaggatgt ttgaccgcat atgcgtctaa cttacgctta atgtggtggg taagaaaacc 111714
 caccgaccgt ggtaaataa ccgaaaatga gggttggtga accaacggag atttgttttc 111774
 ttcaacaaga ccacatctaa ctagaggcag tcccagttct cggcggcggg aatttatattc 111834
 cctcaaggca gacgctgtta gtggtttccc ttctaataac acaatgccgt ggttgcataa 111894
 tacaggatga aacgcacacg tgaactgtcg acgttcggtc caggtgaatt ttaaagccgc 111954
 aaacacgtcc ggggtgtgcag attgactggc gtacaaacgc caggaaaatt cacgcgttac 112014
 ggttaaataa aaatgtaggt acagaagacg cgccaaactt gccacctcac gataatatct 112074
 aagtagaata ctttgccctga gttgcgtgta agctttctgg tcagggtttt gtatattaag 112134
 acctattgtc gtccttttctg ccgttccttg gagataacgt ataatcgatt tacaataagt 112194
 aactagtagt tttgtgtatg cttcttcccc ggccgctagt tctacggtaa acgaatcctg 112254
 gacctcctga acgtaagctg gaagccccgt cggttgcttt ggtggactag gcaatcgaac 112314
 ggaaccccgg gttgttaaata taaacatttc aacatgggtc ttggttgaaa cggttgagat 112374
 aacgtcatct ggatccgggg ataaaaccat catatcggaa tataggctct cattaatagg 112434
 aaaacatgag aataaatcct cgttccagggt ttcaagacat gatagtaaac gcggcccttc 112494
 tgaaaaatca agatcccgta ttaactgttg atataaaatt ttagggctag ctaccaagg 112554
 cggagacgga gcagttttaa ctgcatgtga atataacgac gtttcaaata caatatccga 112614
 tgctacatca ccaaacaacg attcatcaaa tgcgtccaca accgcttggt ccgttttact 112674
 acgattccac gtatctgtac taggatgttc ggttcctaaa ttacactcca tacttataga 112734
 gtaaaatctt tagtttaaata aagcgattcc ctttatcaaa acccgccgtc taatgggggt 112794
 tgtttggtag caactgatta taaactgttc ataataccac gtggtactat ttaaacagtt 112854
 tataatatgt gacatataat acacatttat aataaacaca aaccacgact gtcttttata 112914
 cgttttattta ttatacataa taccgggtaa accgttactg cgtaattata tccctatttt 112974
 cgcgtatcag ttcttgatgc agaacggggc ctacttcgat tagttatacg cccagtcgtt 113034
 tgtgtatccg ttcgactttt tggcttacga acttggtgcgt acatagggtc attacccatg 113094
 cccccctgta aatctccagt ttttcgatta tgtccacggt tggataccga tgctccttca 113154
 cctagggtctg cttcattagc ggcttgtatt aaatttaaac cctcatgcac cgtaatacga 113214
 ataacggctc cggttaacaa acggtctaata tcggcggttat tccttggggg attactattc 113274
 caagccgctt cggcagcctt ttgtgcctgc atggcggcta cgcgccggac cgcttcacaa 113334
 aagacgcgtt tggtatatga tggcgtagga ccgcaccacg agcttggtgc ggtttttggt 113394

9930	9935	9940	
gcg ggt tac aga gga gta att Ala Gly Tyr Arg Gly Val Ile 9945	tca gcc ctt ttg tat Ser Ala Leu Leu Tyr 9950	tac cgg cca Tyr Arg Pro 9955	114634
gga gta acc gtt att tta ccc Gly Val Thr Val Ile Leu Pro 9960	gga cat tta aca atc Gly His Leu Thr Ile 9965	tac ttg ttc Tyr Leu Phe 9970	114679
ccg gta aaa tta aga caa agt Pro Val Lys Leu Arg Gln Ser 9975	cgc ctt ctc cca aaa Arg Leu Leu Pro Lys 9980	aac gtt ctt Asn Val Leu 9985	114724
aaa cat ctg gat cca att ttt Lys His Leu Asp Pro Ile Phe 9990	aaa tcg ata caa gtt Lys Ser Ile Gln Val 9995	caa ccc tta Gln Pro Leu 10000	114769
tca aac tcg ccg tca aat tat Ser Asn Ser Pro Ser Asn Tyr 10005	gaa aaa ccc gtt ata Glu Lys Pro Val Ile 10010	cct gaa ttt Pro Glu Phe 10015	114814
gct gat att tcc acg gta cag Ala Asp Ile Ser Thr Val Gln 10020	cag ggg caa cct tta Gln Gly Gln Pro Leu 10025	cat agg gat His Arg Asp 10030	114859
tct gca gaa tac cat atc gat Ser Ala Glu Tyr His Ile Asp 10035	gtt ccc tta acc tac Val Pro Leu Thr Tyr 10040	aaa cat atc Lys His Ile 10045	114904
atc aat cca aaa cgc caa gaa Ile Asn Pro Lys Arg Gln Glu 10050	gac gcg gga tat gat Asp Ala Gly Tyr Asp 10055	att tgt gta Ile Cys Val 10060	114949
cca tat aac cta tat tta aaa Pro Tyr Asn Leu Tyr Leu Lys 10065	agg aat gaa ttt ata Arg Asn Glu Phe Ile 10070	aaa att gtc Lys Ile Val 10075	114994
tta ccg att ata aga gac tgg Leu Pro Ile Ile Arg Asp Trp 10080	gac tta caa cat ccg Asp Leu Gln His Pro 10085	agt ata aac Ser Ile Asn 10090	115039
gct tat att ttt gga aga tca Ala Tyr Ile Phe Gly Arg Ser 10095	tcg aaa agc cga tca Ser Lys Ser Arg Ser 10100	ggc att atc Gly Ile Ile 10105	115084
gtg tgt cca acg gca tgg cct Val Cys Pro Thr Ala Trp Pro 10110	gca gga gaa cac tgt Ala Gly Glu His Cys 10115	aaa ttc tac Lys Phe Tyr 10120	115129
gta tat aat ctc acg ggt gat Val Tyr Asn Leu Thr Gly Asp 10125	gac ata cgt ata aaa Asp Ile Arg Ile Lys 10130	acg gga gat Thr Gly Asp 10135	115174
cgt ctt gca cag gtc ctg tta Arg Leu Ala Gln Val Leu Leu 10140	ata gat cac aac acc Ile Asp His Asn Thr 10145	caa ata cac Gln Ile His 10150	115219
tta aaa cac aac gtt tta agt Leu Lys His Asn Val Leu Ser 10155	aat att gca ttt cct Asn Ile Ala Phe Pro 10160	tat gct atc Tyr Ala Ile 10165	115264

10155		10160		10165	
cgc ggt	aaa tgt ggc ata ccg	ggt gta caa tgg tat	ttt act aaa	115309	
Arg Gly	Lys Cys Gly Ile Pro	Gly Val Gln Trp Tyr	Phe Thr Lys		
10170		10175		10180	
acg tta	gat cta ata gcc aca	ccc agc gaa cgg gga	acg cgt gga	115354	
Thr Leu	Asp Leu Ile Ala Thr	Pro Ser Glu Arg Gly	Thr Arg Gly		
10185		10190		10195	
ttt ggt	tca act gat aaa gaa	aca aac gat gtc gat	ttt cta cta	115399	
Phe Gly	Ser Thr Asp Lys Glu	Thr Asn Asp Val Asp	Phe Leu Leu		
10200		10205		10210	
aaa cat	tta atgtaataac cacgccagcc agcaatgttt taattttata			115448	
Lys His					
10215					
tacaaaataa	aaacatacac cagaaacggt	tttagttttt atttcaatat ttatacaagc		115508	
ataacatggg	atttcttgat cgcggggggt	gtgcgttgta catcttgcgt ctgttttggg		115568	
gtcaacacgg	gctgaagagt ttctgtcggg	tacgtttttt ttgttaggtt agatgtgtta		115628	
ttatccgata	cttctataag tggggggtta	atttcagata attgtgtcgc ctccgattta		115688	
ataggtgatg	tttttaaacc cacattttcc	ccttttagcta tagataattc atggttgttg		115748	
gaaacatcaa	acgatgcctg aggttttagca	acgaccccaa gagttttctc caaaagaaca		115808	
acatcagaca	tgaccacttc actttcagcg	gtcatttctca gggtttgatc gacaatatca		115868	
tccgtagtaa	catccaccgc gccaacgat	aaatacaaat gggtaattgc agctaaacac		115928	
atatcagcaa	gccgttttga gttttccatg	tgtgaacgga ccacggcggtt aagaccgggg		115988	
ttatcttcag	taaaatgggtg ctgtttttaa	cattcaatgt tacgagaaca tgcagcgtaa		116048	
gttcgcgcca	aagcctgggc gcggaccaa	cgacgggtat tatctgcaga agcgactacg		116108	
tcttctaacg	ttagaggtgc aggcaataat	ccattcacag cggttaaagc ctcttggagg		116168	
cggagcaggg	cggctccttg ggggtgcgtg	tttacacgca cctcttcata agatggctct		116228	
tcagttggta	ttcgagcata tccacataag	ctggcacaca ccgtctgcat gattgactgg		116288	
ctttccaacg	tattgaact atg gat aaa tcc tcc	aaa ccg acg att cgg		116337	
	Met Asp Lys Ser Ser	Lys Pro Thr Ile Arg			
		10220		10225	
tta tta ttt gcc aca	aag gga tgt gca atc	tcc cac tcg ctg ttg		116382	
Leu Leu Phe Ala Thr	Lys Gly Cys Ala Ile	Ser His Ser Leu Leu			
	10230	10235		10240	
ttg ctt acc ggg cag	ata agc aca gaa cct	ctg tat gtg gtg agt		116427	
Leu Leu Thr Gly Gln	Ile Ser Thr Glu Pro	Leu Tyr Val Val Ser			
	10245	10250		10255	
tat act tgg act ccc	gac tta gat gac gtc	ttt gtc aaa aat ggg		116472	
Tyr Thr Trp Thr Pro	Asp Leu Asp Asp Val	Phe Val Lys Asn Gly			

10260					10265					10270					
agg	gaa	gag	atc	acg	caa	gta	atc	cca	act	aaa	cgc	cca	cgt	gaa	116517
Arg	Glu	Glu	Ile	Thr	Gln	Val	Ile	Pro	Thr	Lys	Arg	Pro	Arg	Glu	
				10275					10280					10285	
gta	act	gaa	aac	gat	gaa	gaa	aac	caa	ata	atg	cat	tta	ttt	tgt	116562
Val	Thr	Glu	Asn	Asp	Glu	Glu	Asn	Gln	Ile	Met	His	Leu	Phe	Cys	
				10290					10295					10300	
agt	agg	gac	gtc	aac	gtt	att	ttt	tat	tta	att	ggg	gga	ttt	tca	116607
Ser	Arg	Asp	Val	Asn	Val	Ile	Phe	Tyr	Leu	Ile	Gly	Gly	Phe	Ser	
				10305					10310					10315	
act	gga	gat	gta	cga	tcc	cgg	gtc	tgg	cct	ata	ttt	ttt	tgt	tgt	116652
Thr	Gly	Asp	Val	Arg	Ser	Arg	Val	Trp	Pro	Ile	Phe	Phe	Cys	Cys	
				10320					10325					10330	
ttt	aaa	acc	caa	act	gat	ttt	aaa	gct	tta	tat	aag	gcg	tta	tgg	116697
Phe	Lys	Thr	Gln	Thr	Asp	Phe	Lys	Ala	Leu	Tyr	Lys	Ala	Leu	Trp	
				10335					10340					10345	
tat	gga	gca	ccc	cta	aat	ccg	cat	ata	ata	tct	gat	acc	cta	tgt	116742
Tyr	Gly	Ala	Pro	Leu	Asn	Pro	His	Ile	Ile	Ser	Asp	Thr	Leu	Cys	
				10350					10355					10360	
ata	tcg	gag	acg	ttt	gac	att	cac	tcg	gaa	gtt	ata	caa	act	ctg	116787
Ile	Ser	Glu	Thr	Phe	Asp	Ile	His	Ser	Glu	Val	Ile	Gln	Thr	Leu	
				10365					10370					10375	
atg	gta	aca	aca	cac	cat	tta	aac	cga	aag	gga	tta	tcg	gac	aac	116832
Met	Val	Thr	Thr	His	His	Leu	Asn	Arg	Lys	Gly	Leu	Ser	Asp	Asn	
				10380					10385					10390	
ggc	cta	tgc	atc	aca	gag	gca	aca	ctc	tgc	aag	tta	gtt	aaa	aaa	116877
Gly	Leu	Cys	Ile	Thr	Glu	Ala	Thr	Leu	Cys	Lys	Leu	Val	Lys	Lys	
				10395					10400					10405	
tcc	gtt	ggg	cgt	cag	gag	cta	aca	tca	tta	tat	gcc	cat	tac	gaa	116922
Ser	Val	Gly	Arg	Gln	Glu	Leu	Thr	Ser	Leu	Tyr	Ala	His	Tyr	Glu	
				10410					10415					10420	
cgt	caa	gta	ttg	gct	gca	tat	cga	cga	ctc	tac	tgg	ggg	tat	gga	116967
Arg	Gln	Val	Leu	Ala	Ala	Tyr	Arg	Arg	Leu	Tyr	Trp	Gly	Tyr	Gly	
				10425					10430					10435	
tgc	tcg	ccg	ttt	tgg	tat	att	gtt	cga	ttt	gga	ccc	tct	gaa	aaa	117012
Cys	Ser	Pro	Phe	Trp	Tyr	Ile	Val	Arg	Phe	Gly	Pro	Ser	Glu	Lys	
				10440					10445					10450	
acg	cta	gtg	ttg	gct	aca	cgc	tat	tac	ttg	tta	caa	acg	gac	aca	117057
Thr	Leu	Val	Leu	Ala	Thr	Arg	Tyr	Tyr	Leu	Leu	Gln	Thr	Asp	Thr	
				10455					10460					10465	
agt	tac	aat	acg	ttg	gaa	acc	ccc	tta	tat	gac	tta	cag	gca	att	117102
Ser	Tyr	Asn	Thr	Leu	Glu	Thr	Pro	Leu	Tyr	Asp	Leu	Gln	Ala	Ile	
				10470					10475					10480	
aaa	gat	ttg	ttt	tta	act	tac	caa	gtc	ccg	gca	tta	cct	aat	tgt	117147
Lys	Asp	Leu	Phe	Leu	Thr	Tyr	Gln	Val	Pro	Ala	Leu	Pro	Asn	Cys	

10485					10490					10495					
agt	ggg	tac	aat	att	tcg	gac	ttg	ttg	tct	ttt	gat	aaa	ctt	tcc	117192
Ser	Gly	Tyr	Asn	Ile	Ser	Asp	Leu	Leu	Ser	Phe	Asp	Lys	Leu	Ser	
				10500					10505					10510	
atg	ttt	tgt	tgt	tcc	tca	aca	tat	aca	cga	ggc	ttg	aca	gcc	aaa	117237
Met	Phe	Cys	Cys	Ser	Ser	Thr	Tyr	Thr	Arg	Gly	Leu	Thr	Ala	Lys	
				10515					10520					10525	
aat	gct	cta	tcg	tac	att	tta	cag	cga	ata	cat	aca	gac	aca	acg	117282
Asn	Ala	Leu	Ser	Tyr	Ile	Leu	Gln	Arg	Ile	His	Thr	Asp	Thr	Thr	
				10530					10535					10540	
gaa	ata	cac	gca	gta	tcg	gag	tat	att	acc	aac	gat	aga	aaa	ggc	117327
Glu	Ile	His	Ala	Val	Ser	Glu	Tyr	Ile	Thr	Asn	Asp	Arg	Lys	Gly	
				10545					10550					10555	
ctt	aaa	ggt	cca	gac	cgt	gaa	ttt	ggt	gat	tat	att	tat	ctg	gca	117372
Leu	Lys	Val	Pro	Asp	Arg	Glu	Phe	Val	Asp	Tyr	Ile	Tyr	Leu	Ala	
				10560					10565					10570	
cat	ttt	gaa	tgt	ttc	aat	cgg	aaa	cag	atc	gca	gac	cac	cta	caa	117417
His	Phe	Glu	Cys	Phe	Asn	Arg	Lys	Gln	Ile	Ala	Asp	His	Leu	Gln	
				10575					10580					10585	
gcg	ggt	aca	tac	tca	gat	ttt	gtg	aat	aaa	ccg	gtc	ctc	tta	aaa	117462
Ala	Val	Thr	Tyr	Ser	Asp	Phe	Val	Asn	Lys	Pro	Val	Leu	Leu	Lys	
				10590					10595					10600	
tca	tcc	aac	ctg	gga	aaa	aga	gct	act	gct	aat	ttt	ttt	aat	cat	117507
Ser	Ser	Asn	Leu	Gly	Lys	Arg	Ala	Thr	Ala	Asn	Phe	Phe	Asn	His	
				10605					10610					10615	
gta	cgt	tct	cgt	ctc	aac	atg	cgt	gac	tat	ata	aaa	aag	aac	gta	117552
Val	Arg	Ser	Arg	Leu	Asn	Met	Arg	Asp	Tyr	Ile	Lys	Lys	Asn	Val	
				10620					10625					10630	
att	tgt	gat	gtc	act	gaa	ctt	gga	cct	gag	att	gga	cat	aaa	tat	117597
Ile	Cys	Asp	Val	Thr	Glu	Leu	Gly	Pro	Glu	Ile	Gly	His	Lys	Tyr	
				10635					10640					10645	
aca	att	act	aaa	aca	tat	act	tta	agt	ctt	acg	tat	gcc	gca	aaa	117642
Thr	Ile	Thr	Lys	Thr	Tyr	Thr	Leu	Ser	Leu	Thr	Tyr	Ala	Ala	Lys	
				10650					10655					10660	
cct	agc	aag	ttt	ata	ggc	gta	tgt	gac	cta	gct	aca	acg	cta	act	117687
Pro	Ser	Lys	Phe	Ile	Gly	Val	Cys	Asp	Leu	Ala	Thr	Thr	Leu	Thr	
				10665					10670					10675	
cgt	cgt	gtg	gaa	aac	att	gaa	aaa	caa	ttt	agt	cca	tat	gga	tgg	117732
Arg	Arg	Val	Glu	Asn	Ile	Glu	Lys	Gln	Phe	Ser	Pro	Tyr	Gly	Trp	
				10680					10685					10690	
tcc	tcc	act	att	ccc	tca	aat	cca	ccc	ggc	ttt	gac	gaa	ttg	tct	117777
Ser	Ser	Thr	Ile	Pro	Ser	Asn	Pro	Pro	Gly	Phe	Asp	Glu	Leu	Ser	
				10695					10700					10705	
aat	ttt	gag	gat	tcg	ggc	gtt	tcc	gcg	gag	gcg	tta	cga	gca	gcc	117822
Asn	Phe	Glu	Asp	Ser	Gly	Val	Ser	Ala	Glu	Ala	Leu	Arg	Ala	Ala	

10710					10715					10720					
aac	ttt	gca	aac	gat	aca	cct	aac	caa	agt	ggg	cgt	act	ggg	ttt	117867
Asn	Phe	Ala	Asn	Asp	Thr	Pro	Asn	Gln	Ser	Gly	Arg	Thr	Gly	Phe	
				10725					10730					10735	
gat	acg	agc	ccg	ggg	att	aca	aaa	cta	tta	ctg	ttt	ttc	tct	gct	117912
Asp	Thr	Ser	Pro	Gly	Ile	Thr	Lys	Leu	Leu	Leu	Phe	Phe	Ser	Ala	
				10740					10745					10750	
gcc	act	ggg	ata	gcc	aca	cat	gat	gta	tcc	atc	ctg	agt	tat	aaa	117957
Ala	Thr	Gly	Ile	Ala	Thr	His	Asp	Val	Ser	Ile	Leu	Ser	Tyr	Lys	
				10755					10760					10765	
act	cca	tta	gaa	gcc	ctc	atc	ggc	cat	tct	gag	gta	act	gga	cca	118002
Thr	Pro	Leu	Glu	Ala	Leu	Ile	Gly	His	Ser	Glu	Val	Thr	Gly	Pro	
				10770					10775					10780	
atg	cct	gta	tat	cgg	gta	gcc	ttg	cct	cac	ggc	gcc	caa	gca	ttt	118047
Met	Pro	Val	Tyr	Arg	Val	Ala	Leu	Pro	His	Gly	Ala	Gln	Ala	Phe	
				10785					10790					10795	
gct	gtt	att	gct	aat	gat	acg	tgg	tca	tca	ata	aca	aac	cgt	tac	118092
Ala	Val	Ile	Ala	Asn	Asp	Thr	Trp	Ser	Ser	Ile	Thr	Asn	Arg	Tyr	
				10800					10805					10810	
act	tta	ccg	cac	gag	gct	cga	tta	att	gcg	gag	gac	ctt	aaa	caa	118137
Thr	Leu	Pro	His	Glu	Ala	Arg	Leu	Ile	Ala	Glu	Asp	Leu	Lys	Gln	
				10815					10820					10825	
att	aat	cca	tgt	aat	ttt	gtt	gcc	gct	tca	cta	cga	gat	atg	cag	118182
Ile	Asn	Pro	Cys	Asn	Phe	Val	Ala	Ala	Ser	Leu	Arg	Asp	Met	Gln	
				10830					10835					10840	
ttg	act	tta	cta	tta	tct	acg	tct	gtt	aaa	aac	gtt	tct	aaa	att	118227
Leu	Thr	Leu	Leu	Leu	Ser	Thr	Ser	Val	Lys	Asn	Val	Ser	Lys	Ile	
				10845					10850					10855	
tca	tca	aac	ata	ccc	aaa	gat	cag	ctt	tat	ata	aac	agg	aat	gag	118272
Ser	Ser	Asn	Ile	Pro	Lys	Asp	Gln	Leu	Tyr	Ile	Asn	Arg	Asn	Glu	
				10860					10865					10870	
cta	ttt	aat	aca	aat	ctt	ata	atc	aca	aac	ctc	ata	ctt	gat	gta	118317
Leu	Phe	Asn	Thr	Asn	Leu	Ile	Ile	Thr	Asn	Leu	Ile	Leu	Asp	Val	
				10875					10880					10885	
gac	ttt	cat	ata	aga	aaa	ccc	atc	cca	ttg	ggg	att	tta	cat	gcc	118362
Asp	Phe	His	Ile	Arg	Lys	Pro	Ile	Pro	Leu	Gly	Ile	Leu	His	Ala	
				10890					10895					10900	
ggc	atg	cga	gca	ttt	cgt	cat	ggg	att	tta	acg	gcc	atg	caa	tta	118407
Gly	Met	Arg	Ala	Phe	Arg	His	Gly	Ile	Leu	Thr	Ala	Met	Gln	Leu	
				10905					10910					10915	
ctt	ttt	cca	aag	gcc	gtg	gta	aac	cct	aac	aaa	gac	cca	tgt	tat	118452
Leu	Phe	Pro	Lys	Ala	Val	Val	Asn	Pro	Asn	Lys	Asp	Pro	Cys	Tyr	
				10920					10925					10930	
ttt	tat	aaa	act	gca	tgt	cct	gaa	cct	acc	gtt	gag	gtg	ttg	gat	118497
Phe	Tyr	Lys	Thr	Ala	Cys	Pro	Glu	Pro	Thr	Val	Glu	Val	Leu	Asp	

10935					10940					10945					
gat	gat	aat	tta	ttg	gat	ata	acc	agc	cat	tct	gac	atc	gat	ttt	118542
Asp	Asp	Asn	Leu	Leu	Asp	Ile	Thr	Ser	His	Ser	Asp	Ile	Asp	Phe	
				10950					10955					10960	
tac	ata	gaa	aat	ggc	gaa	tta	tac	acg	tgt	gta	gaa	gag	aat	tat	118587
Tyr	Ile	Glu	Asn	Gly	Glu	Leu	Tyr	Thr	Cys	Val	Glu	Glu	Asn	Tyr	
				10965					10970					10975	
aca	gag	gat	gta	tgg	ttt	ttt	gat	aca	cag	aca	acg	tct	gaa	gtc	118632
Thr	Glu	Asp	Val	Trp	Phe	Phe	Asp	Thr	Gln	Thr	Thr	Ser	Glu	Val	
				10980					10985					10990	
cat	aca	cac	gcc	gat	gta	tca	aac	aat	gaa	aac	ttg	cat	gaa	act	118677
His	Thr	His	Ala	Asp	Val	Ser	Asn	Asn	Glu	Asn	Leu	His	Glu	Thr	
				10995					11000					11005	
cta	ccc	tgt	aac	tgt	aaa	gag	aaa	ata	ggg	ttc	agg	gta	tgc	gta	118722
Leu	Pro	Cys	Asn	Cys	Lys	Glu	Lys	Ile	Gly	Phe	Arg	Val	Cys	Val	
				11010					11015					11020	
cca	atc	cca	aat	ccc	tat	gcg	tta	gtg	ggg	tct	tcc	act	tta	aag	118767
Pro	Ile	Pro	Asn	Pro	Tyr	Ala	Leu	Val	Gly	Ser	Ser	Thr	Leu	Lys	
				11025					11030					11035	
ggg	ttt	gca	caa	ata	tta	cag	caa	gcg	gtg	ttg	ctg	gaa	cgg	gaa	118812
Gly	Phe	Ala	Gln	Ile	Leu	Gln	Gln	Ala	Val	Leu	Leu	Glu	Arg	Glu	
				11040					11045					11050	
ttt	gtt	gaa	tat	att	ggg	ccg	tat	tta	cgg	gac	ttt	tcg	ttt	ata	118857
Phe	Val	Glu	Tyr	Ile	Gly	Pro	Tyr	Leu	Arg	Asp	Phe	Ser	Phe	Ile	
				11055					11060					11065	
gat	act	ggg	gtt	tat	agc	cac	gga	cat	agt	tta	aga	ctg	cct	ttt	118902
Asp	Thr	Gly	Val	Tyr	Ser	His	Gly	His	Ser	Leu	Arg	Leu	Pro	Phe	
				11070					11075					11080	
ttc	tcc	aaa	gta	aca	acc	aca	ggg	acg	gcg	gtt	gga	caa	cta	ctc	118947
Phe	Ser	Lys	Val	Thr	Thr	Thr	Gly	Thr	Ala	Val	Gly	Gln	Leu	Leu	
				11085					11090					11095	
cca	ttt	tat	gtt	gta	cct	gag	cag	tgt	att	gat	ata	tta	gcg	ttt	118992
Pro	Phe	Tyr	Val	Val	Pro	Glu	Gln	Cys	Ile	Asp	Ile	Leu	Ala	Phe	
				11100					11105					11110	
gtg	aca	tca	cat	aga	aac	ccg	gca	aac	ttt	cat	ttt	cat	tca	aga	119037
Val	Thr	Ser	His	Arg	Asn	Pro	Ala	Asn	Phe	His	Phe	His	Ser	Arg	
				11115					11120					11125	
ccg	cag	tcg	aat	gtt	cca	gtg	caa	ttt	att	tta	cat	aac	ctt	ggg	119082
Pro	Gln	Ser	Asn	Val	Pro	Val	Gln	Phe	Ile	Leu	His	Asn	Leu	Gly	
				11130					11135					11140	
ggg	gaa	tac	gca	gag	ttt	ttt	gaa	cgt	aag	gtt	gcg	cgt	aat	aaa	119127
Gly	Glu	Tyr	Ala	Glu	Phe	Phe	Glu	Arg	Lys	Val	Ala	Arg	Asn	Lys	
				11145					11150					11155	
caa	ata	ttt	agc	tcc	ccg	caa	ata	tct	tta	aca	aag	gct	cta	aaa	119172
Gln	Ile	Phe	Ser	Ser	Pro	Gln	Ile	Ser	Leu	Thr	Lys	Ala	Leu	Lys	

11160					11165					11170					
gag	cgc	ggg	gta	act	tgt	ctg	gac	gca	ttt	aca	ctg	gag	gcc	ttt	119217
Glu	Arg	Gly	Val	Thr	Cys	Leu	Asp	Ala	Phe	Thr	Leu	Glu	Ala	Phe	
				11175					11180					11185	
gtc	gac	agc	aca	ata	tta	gaa	tct	att	gtg	gag	cat	att	gct	gtt	119262
Val	Asp	Ser	Thr	Ile	Leu	Glu	Ser	Ile	Val	Glu	His	Ile	Ala	Val	
				11190					11195					11200	
cat	ttc	ccc	ggg	cgt	gat	cgc	gaa	tat	acc	tta	aca	tca	tca	aag	119307
His	Phe	Pro	Gly	Arg	Asp	Arg	Glu	Tyr	Thr	Leu	Thr	Ser	Ser	Lys	
				11205					11210					11215	
tgt	atc	gcc	atc	aaa	agg	gac	tgg	gtg	tta	ttt	cag	ctc	ata	tgc	119352
Cys	Ile	Ala	Ile	Lys	Arg	Asp	Trp	Val	Leu	Phe	Gln	Leu	Ile	Cys	
				11220					11225					11230	
gga	aca	aaa	ggg	ttc	act	tgt	ctt	cga	tat	ccc	cat	cgc	gga	gga	119397
Gly	Thr	Lys	Gly	Phe	Thr	Cys	Leu	Arg	Tyr	Pro	His	Arg	Gly	Gly	
				11235					11240					11245	
aga	acg	gct	ccc	cgg	aca	ttt	gtg	tct	ctg	cga	gtg	gat	cat	cac	119442
Arg	Thr	Ala	Pro	Arg	Thr	Phe	Val	Ser	Leu	Arg	Val	Asp	His	His	
				11250					11255					11260	
aac	cgt	ttg	tgt	att	tcg	ctt	gca	caa	caa	tgt	ttt	gct	aca	aag	119487
Asn	Arg	Leu	Cys	Ile	Ser	Leu	Ala	Gln	Gln	Cys	Phe	Ala	Thr	Lys	
				11265					11270					11275	
tgc	gat	agc	aat	cgc	atg	cat	aca	atc	ttt	act	cta	gaa	gta	cct	119532
Cys	Asp	Ser	Asn	Arg	Met	His	Thr	Ile	Phe	Thr	Leu	Glu	Val	Pro	
				11280					11285					11290	
aat	tat	cca	aat	tta	act	tcg	agt	taa	caccaaccgt	gtgatactac					119579
Asn	Tyr	Pro	Asn	Leu	Thr	Ser	Ser								
				11295											
atcgtgcttg	aattgccatc	ttccacgggt	c	atg	cag	gct	tta	gga	atc						119628
				Met	Gln	Ala	Leu	Gly	Ile						
															11300
aag	aca	gaa	cat	ttt	ata	att	atg	tgt	cta	ctt	agc	gga	cat	gct	119673
Lys	Thr	Glu	His	Phe	Ile	Ile	Met	Cys	Leu	Leu	Ser	Gly	His	Ala	
															11305
gtt	ttt	acc	cta	tgg	tat	acc	gct	cgt	gta	aag	ttt	gaa	cat	gag	119718
Val	Phe	Thr	Leu	Trp	Tyr	Thr	Ala	Arg	Val	Lys	Phe	Glu	His	Glu	
															11320
tgt	gtg	tat	gca	acc	acg	gtg	att	aat	ggt	gga	ccg	gtt	gta	tgg	119763
Cys	Val	Tyr	Ala	Thr	Thr	Val	Ile	Asn	Gly	Gly	Pro	Val	Val	Trp	
															11335
ggg	tct	tat	aac	aac	tct	ctt	ata	tat	gta	acg	ttt	gta	aac	cac	119808
Gly	Ser	Tyr	Asn	Asn	Ser	Leu	Ile	Tyr	Val	Thr	Phe	Val	Asn	His	
															11350
tca	acg	ttt	ttg	gat	ggc	cta	tct	gga	tac	gat	tac	agc	tgc	cgg	119853
Ser	Thr	Phe	Leu	Asp	Gly	Leu	Ser	Gly	Tyr	Asp	Tyr	Ser	Cys	Arg	

11365		11370		11375	
gaa Glu 11380	aat Asn	cta Leu	tta Leu	tca Ser	gga Gly 11385
					gat Asp
					act Thr
					atg Met
					gta Val
					aaa Lys 11390
					acc Thr
					gct Ala
					att Ile
					tct Ser
					119898
aca Thr 11395	cct Pro	ttg Leu	cat His	gac Asp	aaa Lys 11400
					att Ile
					cga Arg
					att Ile
					gtt Val
					ctg Leu 11405
					gga Gly
					aca Thr
					cgt Arg
					aat Asn
					119943
tgt Cys 11410	cac His	gct Ala	tat Tyr	ttt Phe	tgg Trp 11415
					tgc Cys
					gtg Val
					cag Gln
					cta Leu
					aaa Lys 11420
					atg Met
					att Ile
					ttt Phe
					ttt Phe
					119988
gca Ala 11425	tgg Trp	ttt Phe	gta Val	tat Tyr	ggg Gly 11430
					atg Met
					tat Tyr
					tta Leu
					caa Gln
					ttt Phe 11435
					cga Arg
					cga Arg
					ata Ile
					cgt Arg
					120033
cgt Arg 11440	atg Met	ttt Phe	ggg Gly	cca Pro	ttc Phe 11445
					cga Arg
					tca Ser
					tcc Ser
					tgt Cys
					gag Glu 11450
					tta Leu
					ata Ile
					tcc Ser
					ccc Pro
					120078
aca Thr 11455	tca Ser	tat Tyr	tca Ser	ctg Leu	aat Asn 11460
					tac Tyr
					gta Val
					aca Thr
					cgg Arg
					gtt Val 11465
					att Ile
					tcg Ser
					aac Asn
					att Ile
					120123
ctt Leu 11470	ctt Leu	ggg Gly	tac Tyr	cca Pro	tat Tyr 11475
					aca Thr
					aag Lys
					ttg Leu
					gca Ala
					agg Arg 11480
					ttg Leu
					tta Leu
					tgt Cys
					gat Asp
					120168
ggt Val 11485	tcc Ser	atg Met	cga Arg	cgg Arg	gat Asp 11490
					ggg Gly
					atg Met
					agt Ser
					aaa Lys
					gta Val 11495
					ttt Phe
					aat Asn
					gct Ala
					gac Asp
					120213
cct Pro 11500	ata Ile	agt Ser	ttt Phe	tta Leu	tat Tyr 11505
					atg Met
					cat His
					aaa Lys
					ggg Gly
					ggt Val 11510
					acg Thr
					tta Leu
					ttg Leu
					atg Met
					120258
ctt Leu 11515	ttg Leu	gag Glu	ggt Val	atc Ile	gct Ala 11520
					cat His
					ata Ile
					tca Ser
					tct Ser
					gga Gly 11525
					tgt Cys
					att Ile
					gtg Val
					ctt Leu
					120303
tta Leu 11530	acg Thr	ctt Leu	ggc Gly	ggt Val	gca Ala 11535
					tat Tyr
					aca Thr
					cca Pro
					tgc Cys
					gcg Ala 11540
					tta Leu
					tta Leu
					tac Tyr
					ccc Pro
					120348
aca Thr 11545	tac Tyr	att Ile	cgg Arg	att Ile	ctg Leu 11550
					gcc Ala
					tgg Trp
					ggt Val
					ggt Val
					gta Val 11555
					tgc Cys
					acg Thr
					ctc Leu
					gct Ala
					120393
ata Ile 11560	gta Val	gag Glu	ctt Leu	ata Ile	tct Ser 11565
					tat Tyr
					ggt Val
					aga Arg
					cca Pro
					aaa Lys 11570
					cca Pro
					acc Thr
					aag Lys
					gat Asp
					120438
aat Asn 11575	cat His	tta Leu	aat Asn	cat His	atc Ile 11580
					aat Asn
					acg Thr
					ggg Gly
					gga Gly
					ata Ile 11585
					cgt Arg
					ggg Gly
					ata Ile
					tgc Cys
					120483
aca Thr	aca Thr	tgt Cys	tgc Cys	gct Ala	aca Thr
					gta Val
					atg Met
					tcc Ser
					ggc Gly
					ctt Leu
					gct Ala
					ata Ile
					aaa Lys
					tgt Cys
					120528

11590		11595		11600	
ttt	tat atc gtc ata	ttt	gct ata gca gtg	gtt	att ttt atg cat 120573
Phe	Tyr Ile Val Ile	Phe	Ala Ile Ala Val	Val	Ile Phe Met His
11605		11610		11615	
tac	gaa caa agg gtg	cag	gta agc ttg ttt	ggg	gaa agt gaa aac 120618
Tyr	Glu Gln Arg Val	Gln	Val Ser Leu Phe	Gly	Glu Ser Glu Asn
11620		11625		11630	
tcc	cag aag cat taa	tcatgtgact	aaacacgccc	attgcgggggt	tgggtgagcc 120673
Ser	Gln Lys His				
11635					
tataaattct	acaacattgg	cggaagatac	aggcaactgc	aaacacgcaa	ttgtcagata 120733
ttttgcagcc	atg gcc	tct gct tca att cca	acc gac cca gac gtg		120779
	Met Ala	Ser Ala Ser Ile Pro	Thr Asp Pro Asp Val		
	11640		11645		11650
tct act att tgt gaa	gac ttt atg aat ttg	cta cca gac gaa cct			120824
Ser Thr Ile Cys Glu	Asp Phe Met Asn Leu	Leu Pro Asp Glu Pro			
	11655		11660		11665
tcg gat gac ttt gca	ttg gaa gtc acc gat	tgg gca aat gat gaa			120869
Ser Asp Asp Phe Ala	Leu Glu Val Thr Asp	Trp Ala Asn Asp Glu			
	11670		11675		11680
gct att ggc tcc act	cca ggc gag gac tcc	aca acg tct aga act			120914
Ala Ile Gly Ser Thr	Pro Gly Glu Asp Ser	Thr Thr Ser Arg Thr			
	11685		11690		11695
gtg tat gtg gag cgt	act gca gat aca gca	tat aat cca cgg tat			120959
Val Tyr Val Glu Arg	Thr Ala Asp Thr Ala	Tyr Asn Pro Arg Tyr			
	11700		11705		11710
tcc aaa cga agg cac	gga agg cgt gaa agc	tac cac cac aat cgc			121004
Ser Lys Arg Arg His	Gly Arg Arg Glu Ser	Tyr His His Asn Arg			
	11715		11720		11725
ccg aaa act ttg gtt	gtt gta tta ccc gat	tca aac cat cat gga			121049
Pro Lys Thr Leu Val	Val Val Leu Pro Asp	Ser Asn His His Gly			
	11730		11735		11740
gga aga gac gtg gag	act gga tat gca cgc	atc gaa cgg gga cat			121094
Gly Arg Asp Val Glu	Thr Gly Tyr Ala Arg	Ile Glu Arg Gly His			
	11745		11750		11755
cga cga tca tcc aga	tct tat aac act caa	agt tca aga aaa cac			121139
Arg Arg Ser Ser Arg	Ser Tyr Asn Thr Gln	Ser Ser Arg Lys His			
	11760		11765		11770
cgt gat cga tcc ctg	tca aat cga aga cgg	cgt cct aca acg cct			121184
Arg Asp Arg Ser Leu	Ser Asn Arg Arg Arg	Arg Pro Thr Thr Pro			
	11775		11780		11785
cct gca atg acc acg	gga gaa aga aat gat	cag aca cat gac gaa			121229
Pro Ala Met Thr Thr	Gly Glu Arg Asn Asp	Gln Thr His Asp Glu			
	11790		11795		11800

tcg tac agg ttg cga	ttt tcc aag aga gac	gcc cgc cga gag cgt	121274
Ser Tyr Arg Leu Arg	Phe Ser Lys Arg Asp	Ala Arg Arg Glu Arg	
11805	11810	11815	
att cga aaa gag tat	gat atc ccg gtc gat	cga att acg ggc cgt	121319
Ile Arg Lys Glu Tyr	Asp Ile Pro Val Asp	Arg Ile Thr Gly Arg	
11820	11825	11830	
gct att gaa gtc gtc	tcc acc gcg gga gcc	agc gtg acc att gac	121364
Ala Ile Glu Val Val	Ser Thr Ala Gly Ala	Ser Val Thr Ile Asp	
11835	11840	11845	
tcg gta cgc cat tta	gat gaa aca att gaa	aaa ctg gta gtc cga	121409
Ser Val Arg His Leu	Asp Glu Thr Ile Glu	Lys Leu Val Val Arg	
11850	11855	11860	
tat gcc aca ata caa	gag ggt gat tca tgg	gct tcc ggt gga tgt	121454
Tyr Ala Thr Ile Gln	Glu Gly Asp Ser Trp	Ala Ser Gly Gly Cys	
11865	11870	11875	
ttt ccg ggg ata aaa	caa aac aca tct tgg	ccg gag ttg atg ttg	121499
Phe Pro Gly Ile Lys	Gln Asn Thr Ser Trp	Pro Glu Leu Met Leu	
11880	11885	11890	
tac gga cat gaa ctt	tat cgt acc ttt gag	tca tat aaa atg gac	121544
Tyr Gly His Glu Leu	Tyr Arg Thr Phe Glu	Ser Tyr Lys Met Asp	
11895	11900	11905	
tca cgt att gcc cgc	gcg ttg cgt gag aga	gtc ata cgt gga gaa	121589
Ser Arg Ile Ala Arg	Ala Leu Arg Glu Arg	Val Ile Arg Gly Glu	
11910	11915	11920	
tct ttg att gaa gcg	ttg gag tct gcg gat	gaa ctg tta acg tgg	121634
Ser Leu Ile Glu Ala	Leu Glu Ser Ala Asp	Glu Leu Leu Thr Trp	
11925	11930	11935	
att aaa atg tta gcg	gca aaa aac ttg ccc	atc tac aca aat aat	121679
Ile Lys Met Leu Ala	Ala Lys Asn Leu Pro	Ile Tyr Thr Asn Asn	
11940	11945	11950	
ccc att gtt gca acc	tcg aag tca ctt ttg	gag aat tta aag tta	121724
Pro Ile Val Ala Thr	Ser Lys Ser Leu Leu	Glu Asn Leu Lys Leu	
11955	11960	11965	
aag ctg ggg cct ttt	gta aga tgt ctt ctt	cta aac agg gac aac	121769
Lys Leu Gly Pro Phe	Val Arg Cys Leu Leu	Leu Asn Arg Asp Asn	
11970	11975	11980	
gat ttg ggg tct cgt	act ctc ccc gaa ctg	ttg cgc cag caa cgt	121814
Asp Leu Gly Ser Arg	Thr Leu Pro Glu Leu	Leu Arg Gln Gln Arg	
11985	11990	11995	
ttt agt gat atc acg	tgt att act act tat	atg ttt gtt atg att	121859
Phe Ser Asp Ile Thr	Cys Ile Thr Thr Tyr	Met Phe Val Met Ile	
12000	12005	12010	
gcc cgc att gct aat	ata gtt gtc cgt ggc	tct aaa ttt gtg gaa	121904
Ala Arg Ile Ala Asn	Ile Val Val Arg Gly	Ser Lys Phe Val Glu	
12015	12020	12025	

tat gat gat atc agt	tgt aac gtt caa gtg	tta caa gaa tat aca	121949
Tyr Asp Asp Ile Ser	Cys Asn Val Gln Val	Leu Gln Glu Tyr Thr	
12030	12035	12040	
ccc ggg tca tgt ctg	gcc ggt gtt tta gag	gcc cta atc acc cac	121994
Pro Gly Ser Cys Leu	Ala Gly Val Leu Glu	Ala Leu Ile Thr His	
12045	12050	12055	
caa cgc gag tgt ggt	cgt gtt gaa tgt acc	ctc tca act tgg gcc	122039
Gln Arg Glu Cys Gly	Arg Val Glu Cys Thr	Leu Ser Thr Trp Ala	
12060	12065	12070	
ggg cat ctt tct gac	gcc cgt cca tac ggt	aaa tat ttt aag tgt	122084
Gly His Leu Ser Asp	Ala Arg Pro Tyr Gly	Lys Tyr Phe Lys Cys	
12075	12080	12085	
agt acc ttt aac tgc	tta aataaaaaat accttttttca	tgcttgtcaa	122132
Ser Thr Phe Asn Cys			
12090			
aacatactaa tttgtatttt	taatcattaa gcatatttac	ctggttagaat agtaaataacc	122192
tatttcacatgc ttgtaaaaca	tatcaattta tattttttaat	cattatacac cacccttga	122252
ttttatcaat tgtttatgtg	attctatatt aataaaagac	taataaaaaat gtaatattgt	122312
gggagttttt aaggcgacgt	tggggatata tgggcgggat	tacattgctt tcaaaccaat	122372
atctttgcaa ttccgtctct	gattcgggta aaacacacac	cagacgtgta ccgaacgttt	122432
aatta atg gat aca acg	gga gct tcc gaa agc	agt caa ccc atc cga	122479
Met Asp Thr Thr	Gly Ala Ser Glu Ser	Ser Gln Pro Ile Arg	
12095	12100		
gtg aat ctt aaa cct	gac ccg ttg gcg tcg	ttt aca caa gtt ata	122524
Val Asn Leu Lys Pro	Asp Pro Leu Ala Ser	Phe Thr Gln Val Ile	
12105	12110	12115	
ccg cca ctg gcg ttg	gaa aca acg tgg aca	tgc cct gcc aac tca	122569
Pro Pro Leu Ala Leu	Glu Thr Thr Trp Thr	Cys Pro Ala Asn Ser	
12120	12125	12130	
cat gca ccg acg cca	tcc cct ctg tac ggt	gtt aag agg tta tgt	122614
His Ala Pro Thr Pro	Ser Pro Leu Tyr Gly	Val Lys Arg Leu Cys	
12135	12140	12145	
gct ctt cga gca aca	tgc ggc cgg gct gat	gat tta cac gct ttt	122659
Ala Leu Arg Ala Thr	Cys Gly Arg Ala Asp	Asp Leu His Ala Phe	
12150	12155	12160	
ttg att gga ctt gga	cgt cga gat aaa cca	tct gaa tcc cca atg	122704
Leu Ile Gly Leu Gly	Arg Arg Asp Lys Pro	Ser Glu Ser Pro Met	
12165	12170	12175	
tat gtt gac cta cag	ccg ttt tgc agc ctc	cta aat tcc caa cga	122749
Tyr Val Asp Leu Gln	Pro Phe Cys Ser Leu	Leu Asn Ser Gln Arg	
12180	12185	12190	
ctg tta ccg gaa atg	gct aat tat aac acc	cta tgc gat gca ccc	122794
Leu Leu Pro Glu Met	Ala Asn Tyr Asn Thr	Leu Cys Asp Ala Pro	

12195		12200		12205	
ttc agc gcc gca act cag	cag atg atg ctg gag	tcc gga cag ctg	122839		
Phe Ser Ala Ala Thr Gln	Gln Met Met Leu Glu	Ser Gly Gln Leu			
12210		12215		12220	
ggt gta cat ctg gcg gct	att ggg tat cac tgt	cat tgt aaa tcc	122884		
Gly Val His Leu Ala Ala	Ile Gly Tyr His Cys	His Cys Lys Ser			
12225		12230		12235	
ccc ttc tcg gcg gag tgt	tgg acc ggt gca tcc	gag gca tac gat	122929		
Pro Phe Ser Ala Glu Cys	Trp Thr Gly Ala Ser	Glu Ala Tyr Asp			
12240		12245		12250	
cat gtt gta tgt ggg gga	aaa gcc cga gcg gct	gtc ggc gga cta	122974		
His Val Val Cys Gly Gly	Lys Ala Arg Ala Ala	Val Gly Gly Leu			
12255		12260		12265	
tga actacacatt taaataaaaa tacgtacaat cgaaaaaagg tgtattttat			123027		
ttagtgatta catcaatacg ccctccgtag gttcggcaaa tctaaccggt tgacagaccg			123087		
gctgttgacg gggggatcct ttcaatatcc cacgaatgtt ggaaactgtt ggtcttcctt			123147		
gggctgttag ggttgggaga gtgggtcggg ctgacgtggg aagtgcgggt tcaccagagt			123207		
cttctgtcaa gttgcatgtt aacgtcgcgc ttatacaagg tgtttcagtg gtatttttgcg			123267		
cgatattctc ccaaaacata agacgttgca tatgcatatc ataaatatta ccccgccata			123327		
aacagagatc tctgttactt aaaccgtgtg tgcggagaaa tgtaccata gatggagcca			123387		
gtaaatgcaa gcccgtagca cattcatacc caagcgttgt ggatcgcttt tccttcatcg			123447		
ccaaaataat aaatgtcctt gcacctccag gcgtcattgc acgccctatt agacgggcaa			123507		
ggctaagacg ttcgccgggt ttgctatatt tgccaataat tacatagggt ttggtacagg			123567		
taatgtgtaa cgttcctccg cctggcagggt ctacagttct ccccgcaagc actcgtaata			123627		
aacatcgctt ttctgacgcg ggattttcct cggcgggtggc gtttaaactg ggacgcacca			123687		
gagtggagcc cataataaat gcgggaacat gcccatatgc aagtgtctca gaaattacat			123747		
gcattttatg attttacggg ggtgggttac gataatagct attaaacaaa caccaataa			123807		
agcatttttt gtagaacctt tattgggtaa cacagtcttt tcacgtgaca ggcaatgtat			123867		
aaataacgta cggatgcact taagatgtat cgcacataaa tttatataag ctgtagcaaa			123927		
gtataagcaa atcctgttaa tattatattt ttgggatccg ca atg	tcc agg gta	123981			
	Met Ser Arg Val				
		12270			
tcg gag tat ggg gta ccg gaa	ggt gtt cgg gaa tct	gat agc gat	124026		
Ser Glu Tyr Gly Val Pro Glu	Gly Val Arg Glu Ser	Asp Ser Asp			
12275		12280		12285	
aca gac tct gtg ttt atg tat	cag cat aca gag ctt	atg cag aac	124071		
Thr Asp Ser Val Phe Met Tyr	Gln His Thr Glu Leu	Met Gln Asn			

12290	12295	12300	
aac gcg tcg cca ctc gtc gtt	caa aca aga cca ccg	gcg gtt ctt	124116
Asn Ala Ser Pro Leu Val Val	Gln Thr Arg Pro Pro	Ala Val Leu	
12305	12310	12315	
att cca ctg gtt gat gtc cca	agg cca cga tcc cgg	aga aag gcg	124161
Ile Pro Leu Val Asp Val Pro	Arg Pro Arg Ser Arg	Arg Lys Ala	
12320	12325	12330	
tcc gcg caa ctg aaa atg cca	atg gac agg tta tgc	aac gta ctg	124206
Ser Ala Gln Leu Lys Met Gln	Met Asp Arg Leu Cys	Asn Val Leu	
12335	12340	12345	
ggt gta gta ctc cag atg gcg	acg ttg gct ttg gtg	aca tat ata	124251
Gly Val Val Leu Gln Met Ala	Thr Leu Ala Leu Val	Thr Tyr Ile	
12350	12355	12360	
gct ttt gtt gtg cat aca cgc	gcg aca agc tgc aag	cga gaa taa	124296
Ala Phe Val Val His Thr Arg	Ala Thr Ser Cys Lys	Arg Glu	
12365	12370	12375	
ataccttccc cttccggaca gtagtttcat gtagttgagt tgggaggttc ctcgggaaaa			124356
acggcaacaa tggcgaccac gacagcagta aggggtgagaa taccaaaaag aattaataaaa			124416
gccggtacac agcattttgcg aattcttaga aaagccagct gaagtctgtg gattccatca			124476
taagcgcagt ctaggcaatc gtaagactgt tgggtggtgc cattctccac gtgaggaaaa			124536
agaggcgggg agaacaccag actctcgcgg cttctgtaag gggggggcgc gtctgccacg			124596
gcctcggcgt atgtgggtag gtaggggatg ggggtcgcaa cgatcatccat gctggggggac			124656
gacgtgaggg tgaccggcgg ggtcccaggt cggcgggagt agtgcacggt cgccatccga			124716
gcagtaaacg aggggtggac gcaaaaggcg cgggttttgt taaaggctgg cggggggggg			124776
tttcccggca aaaaatccca tccccccga tggtcgcccc gcaaacgcgc ggggaggtgg			124836
ggtcgctttt ttttttctct ctcgaggggg ccgcgagagg gctggcct			124884

<210> 52
 <211> 278
 <212> PRT
 <213> Varicella zoster

<400> 52

Met	Phe	Cys	Thr	Ser	Pro	Ala	Thr	Arg	Gly	Asp	Ser	Ser	Glu	Ser	Lys
1				5					10				15		

Pro	Gly	Ala	Ser	Val	Asp	Val	Asn	Gly	Lys	Met	Glu	Tyr	Gly	Ser	Ala
			20					25					30		

Pro	Gly	Pro	Leu	Asn	Gly	Arg	Asp	Thr	Ser	Arg	Gly	Pro	Gly	Ala	Phe
		35					40					45			

Cys Thr Pro Gly Trp Glu Ile His Pro Ala Arg Leu Val Glu Asp Ile
 50 55 60

Asn Arg Val Phe Leu Cys Ile Ala Gln Ser Ser Gly Arg Val Thr Arg
 65 70 75 80

Asp Ser Arg Arg Leu Arg Arg Ile Cys Leu Asp Phe Tyr Leu Met Gly
 85 90 95

Arg Thr Arg Gln Arg Pro Thr Leu Ala Cys Trp Glu Glu Leu Leu Gln
 100 105 110

Leu Gln Pro Thr Gln Thr Gln Cys Leu Arg Ala Thr Leu Met Glu Val
 115 120 125

Ser His Arg Pro Pro Arg Gly Glu Asp Gly Phe Ile Glu Ala Pro Asn
 130 135 140

Val Pro Leu His Arg Ser Ala Leu Glu Cys Asp Val Ser Asp Asp Gly
 145 150 155 160

Gly Glu Asp Asp Ser Asp Asp Asp Gly Ser Thr Pro Ser Asp Val Ile
 165 170 175

Glu Phe Arg Asp Ser Asp Ala Glu Ser Ser Asp Gly Glu Asp Phe Ile
 180 185 190

Val Glu Glu Glu Ser Glu Glu Ser Thr Asp Ser Cys Glu Pro Asp Gly
 195 200 205

Val Pro Gly Asp Cys Tyr Arg Asp Gly Asp Gly Cys Asn Thr Pro Ser
 210 215 220

Pro Lys Arg Pro Gln Arg Ala Ile Glu Arg Tyr Ala Gly Ala Glu Thr
 225 230 235 240

Ala Glu Tyr Thr Ala Ala Lys Ala Leu Thr Ala Leu Gly Glu Gly Gly
 245 250 255

Val Asp Trp Lys Arg Arg Arg His Glu Ala Pro Arg Arg His Asp Ile
 260 265 270

Pro Pro Pro His Gly Val
 275

<210> 53
 <211> 180
 <212> PRT
 <213> Varicella zoster

<400> 53

Met Asn Leu Cys Gly Ser Arg Gly Glu His Pro Gly Gly Glu Tyr Ala
 1 5 10 15

Gly Leu Tyr Cys Thr Arg His Asp Thr Pro Ala His Gln Ala Leu Met
 20 25 30

Asn Asp Ala Glu Arg Tyr Phe Ala Ala Ala Leu Cys Ala Ile Ser Thr
 35 40 45

Glu Ala Tyr Glu Ala Phe Ile His Ser Pro Ser Glu Arg Pro Cys Ala
 50 55 60

Ser Leu Trp Gly Arg Ala Lys Asp Ala Phe Gly Arg Met Cys Gly Glu
 65 70 75 80

Leu Ala Ala Asp Arg Gln Arg Pro Pro Ser Val Pro Pro Ile Arg Arg
 85 90 95

Ala Val Leu Ser Leu Leu Arg Glu Gln Cys Met Pro Asp Pro Gln Ser
 100 105 110

His Leu Glu Leu Ser Glu Arg Leu Ile Leu Met Ala Tyr Trp Cys Cys
 115 120 125

Leu Gly His Ala Gly Leu Pro Thr Ile Gly Leu Ser Pro Asp Asn Lys
 130 135 140

Cys Ile Arg Ala Glu Leu Tyr Asp Arg Pro Gly Gly Ile Cys His Arg
 145 150 155 160

Leu Phe Asp Ala Tyr Leu Gly Cys Gly Ser Leu Gly Val Pro Arg Thr
 165 170 175

Tyr Glu Arg Ser
 180

<210> 54
 <211> 102
 <212> PRT

<213> Varicella zoster

<400> 54

Met Ala Gly Gln Asn Thr Met Glu Gly Glu Ala Val Ala Leu Leu Met
1 5 10 15

Glu Ala Val Val Thr Pro Arg Ala Gln Pro Asn Asn Thr Thr Ile Thr
20 25 30

Ala Ile Gln Pro Ser Arg Ser Ala Glu Lys Cys Tyr Tyr Ser Asp Ser
35 40 45

Glu Asn Glu Thr Ala Asp Glu Phe Leu Arg Arg Ile Gly Lys Tyr Gln
50 55 60

His Lys Ile Tyr His Arg Lys Lys Phe Cys Tyr Ile Thr Leu Ile Ile
65 70 75 80

Val Phe Val Phe Ala Met Thr Gly Ala Ala Phe Ala Leu Gly Tyr Ile
85 90 95

Thr Ser Gln Phe Val Gly
100

<210> 55

<211> 1310

<212> PRT

<213> Varicella zoster

<400> 55

Met Asp Thr Pro Pro Met Gln Arg Ser Thr Pro Gln Arg Ala Gly Ser
1 5 10 15

Pro Asp Thr Leu Glu Leu Met Asp Leu Leu Asp Ala Ala Ala Ala Ala
20 25 30

Ala Glu His Arg Ala Arg Val Val Thr Ser Ser Gln Pro Asp Asp Leu
35 40 45

Leu Phe Gly Glu Asn Gly Val Met Val Gly Arg Glu His Glu Ile Val
50 55 60

Ser Ile Pro Ser Val Ser Gly Leu Gln Pro Glu Pro Arg Thr Glu Asp
65 70 75 80

Val Gly Glu Glu Leu Thr Gln Asp Asp Tyr Val Cys Glu Asp Gly Gln
367

85

90

95

Asp Leu Met Gly Ser Pro Val Ile Pro Leu Ala Glu Val Phe His Thr
 100 105 110

Arg Phe Ser Glu Ala Gly Ala Arg Glu Pro Thr Gly Ala Asp Arg Ser
 115 120 125

Leu Glu Thr Val Ser Leu Gly Thr Lys Leu Ala Arg Ser Pro Lys Pro
 130 135 140

Pro Met Asn Asp Gly Glu Thr Gly Arg Gly Thr Thr Pro Pro Phe Pro
 145 150 155 160

Gln Ala Phe Ser Pro Val Ser Pro Ala Ser Pro Val Gly Asp Ala Ala
 165 170 175

Gly Asn Asp Gln Arg Glu Asp Gln Arg Ser Ile Pro Arg Gln Thr Thr
 180 185 190

Arg Gly Asn Ser Pro Gly Leu Pro Ser Val Val His Arg Asp Arg Gln
 195 200 205

Thr Gln Ser Ile Ser Gly Lys Lys Pro Gly Asp Glu Gln Ala Gly His
 210 215 220

Ala His Ala Ser Gly Asp Gly Val Val Leu Gln Lys Thr Gln Arg Pro
 225 230 235 240

Ala Gln Gly Lys Ser Pro Lys Lys Lys Thr Leu Lys Val Lys Val Pro
 245 250 255

Leu Pro Ala Arg Lys Pro Gly Gly Pro Val Pro Gly Pro Val Glu Gln
 260 265 270

Leu Tyr His Val Leu Ser Asp Ser Val Pro Ala Lys Gly Ala Lys Ala
 275 280 285

Asp Leu Pro Phe Glu Thr Asp Asp Thr Arg Pro Arg Lys His Asp Ala
 290 295 300

Arg Gly Ile Thr Pro Arg Val Pro Gly Arg Ser Ser Gly Gly Lys Pro
 305 310 315 320

Arg Ala Phe Leu Ala Leu Pro Gly Arg Ser His Ala Pro Asp Pro Ile
 368

325

330

335

Glu Asp Asp Ser Pro Val Glu Lys Lys Pro Lys Ser Arg Glu Phe Val
 340 345 350

Ser Ser Ser Ser Ser Ser Ser Ser Trp Gly Ser Ser Ser Glu Asp Glu
 355 360 365

Asp Asp Glu Pro Arg Arg Val Ser Val Gly Ser Glu Thr Thr Gly Ser
 370 375 380

Arg Ser Gly Arg Glu His Ala Pro Ser Pro Ser Asn Ser Asp Asp Ser
 385 390 395 400

Asp Ser Asn Asp Gly Gly Ser Thr Lys Gln Asn Ile Gln Pro Gly Tyr
 405 410 415

Arg Ser Ile Ser Gly Pro Asp Pro Arg Ile Arg Lys Thr Lys Arg Leu
 420 425 430

Ala Gly Glu Pro Gly Arg Gln Arg Gln Lys Ser Phe Ser Leu Pro Arg
 435 440 445

Ser Arg Thr Pro Ile Ile Pro Pro Val Ser Gly Pro Leu Met Met Pro
 450 455 460

Asp Gly Ser Pro Trp Pro Gly Ser Ala Pro Leu Pro Ser Asn Arg Val
 465 470 475 480

Arg Phe Gly Pro Ser Gly Glu Thr Arg Glu Gly His Trp Glu Asp Glu
 485 490 495

Ala Val Arg Ala Ala Arg Ala Arg Tyr Glu Ala Ser Thr Glu Pro Val
 500 505 510

Pro Leu Tyr Val Pro Glu Leu Gly Asp Pro Ala Arg Gln Tyr Arg Ala
 515 520 525

Leu Ile Asn Leu Ile Tyr Cys Pro Asp Arg Asp Pro Ile Ala Trp Leu
 530 535 540

Gln Asn Pro Lys Leu Thr Gly Val Asn Ser Ala Leu Asn Gln Phe Tyr
 545 550 555 560

Gln Lys Leu Leu Pro Pro Gly Arg Ala Gly Thr Ala Val Thr Gly Ser
 369

565

570

575

Val Ala Ser Pro Val Pro His Val Gly Glu Ala Met Ala Thr Gly Glu
580 585 590

Ala Leu Trp Ala Leu Pro His Ala Ala Ala Ala Val Ala Met Ser Arg
595 600 605

Arg Tyr Asp Arg Ala Gln Lys His Phe Ile Leu Gln Ser Leu Arg Arg
610 615 620

Ala Phe Ala Ser Met Ala Tyr Pro Glu Ala Thr Gly Ser Ser Pro Ala
625 630 635 640

Ala Arg Ile Ser Arg Gly His Pro Ser Pro Thr Thr Pro Ala Thr Gln
645 650 655

Ala Pro Asp Pro Gln Pro Ser Ala Ala Ala Arg Ser Leu Ser Val Cys
660 665 670

Pro Pro Asp Asp Arg Leu Arg Thr Pro Arg Lys Arg Lys Ser Gln Pro
675 680 685

Val Glu Ser Arg Ser Leu Leu Asp Lys Ile Arg Glu Thr Pro Val Ala
690 695 700

Asp Ala Arg Val Ala Asp Asp His Val Val Ser Lys Ala Lys Arg Arg
705 710 715 720

Val Ser Glu Pro Val Thr Ile Thr Ser Gly Pro Val Val Asp Pro Pro
725 730 735

Ala Val Ile Thr Met Pro Leu Asp Gly Pro Ala Pro Asn Gly Gly Phe
740 745 750

Arg Arg Ile Pro Arg Gly Ala Leu His Thr Pro Val Pro Ser Asp Gln
755 760 765

Ala Arg Lys Ala Tyr Cys Thr Pro Glu Thr Ile Ala Arg Leu Val Asp
770 775 780

Asp Pro Leu Phe Pro Thr Ala Trp Arg Pro Ala Leu Ser Phe Asp Pro
785 790 795 800

Gly Ala Leu Ala Glu Ile Ala Ala Arg Arg Pro Gly Gly Gly Asp Arg
370

805

810

815

Arg Phe Gly Pro Pro Ser Gly Val Glu Ala Leu Arg Arg Arg Cys Ala
 820 825 830

Trp Met Arg Gln Ile Pro Asp Pro Glu Asp Val Arg Leu Leu Ile Ile
 835 840 845

Tyr Asp Pro Leu Pro Gly Glu Asp Ile Asn Gly Pro Leu Glu Ser Thr
 850 855 860

Leu Ala Thr Asp Pro Gly Pro Ser Trp Ser Pro Ser Arg Gly Gly Leu
 865 870 875 880

Ser Val Val Leu Ala Ala Leu Ser Asn Arg Leu Cys Leu Pro Ser Thr
 885 890 895

His Ala Trp Ala Gly Asn Trp Thr Gly Pro Pro Asp Val Ser Ala Leu
 900 905 910

Asn Ala Arg Gly Val Leu Leu Leu Ser Thr Arg Asp Leu Ala Phe Ala
 915 920 925

Gly Ala Val Glu Tyr Leu Gly Ser Arg Leu Ala Ser Ala Arg Arg Arg
 930 935 940

Leu Leu Val Leu Asp Ala Val Ala Leu Glu Arg Trp Pro Arg Asp Gly
 945 950 955 960

Pro Ala Leu Ser Gln Tyr His Val Tyr Val Arg Ala Pro Ala Arg Pro
 965 970 975

Asp Ala Gln Ala Val Val Arg Trp Pro Asp Ser Ala Val Thr Glu Gly
 980 985 990

Leu Ala Arg Ala Val Phe Ala Ser Ser Arg Thr Phe Gly Pro Ala Ser
 995 1000 1005

Phe Ala Arg Ile Glu Thr Ala Phe Ala Asn Leu Tyr Pro Gly Glu
 1010 1015 1020

Gln Pro Leu Cys Leu Cys Arg Gly Gly Asn Val Ala Tyr Thr Val
 1025 1030 1035

Cys Thr Arg Ala Gly Pro Lys Thr Arg Val Pro Leu Ser Pro Arg

1040	1045	1050
Glu Tyr Arg Gln Tyr Val Leu Pro Gly Phe Asp Gly Cys Lys Asp 1055 1060 1065		
Leu Ala Arg Gln Ser Arg Gly Leu Gly Leu Gly Ala Ala Asp Phe 1070 1075 1080		
Val Asp Glu Ala Ala His Ser His Arg Ala Ala Asn Arg Trp Gly 1085 1090 1095		
Leu Gly Ala Ala Leu Arg Pro Val Phe Leu Pro Glu Gly Arg Arg 1100 1105 1110		
Pro Gly Ala Ala Gly Pro Glu Ala Gly Asp Val Pro Thr Trp Ala 1115 1120 1125		
Arg Val Phe Cys Arg His Ala Leu Leu Glu Pro Asp Pro Ala Ala 1130 1135 1140		
Glu Pro Leu Val Leu Pro Pro Val Ala Gly Arg Ser Val Ala Leu 1145 1150 1155		
Tyr Ala Ser Ala Asp Glu Ala Arg Asn Ala Leu Pro Pro Ile Pro 1160 1165 1170		
Arg Val Met Trp Pro Pro Gly Phe Gly Ala Ala Glu Thr Val Leu 1175 1180 1185		
Glu Gly Ser Asp Gly Thr Arg Phe Val Phe Gly His His Gly Gly 1190 1195 1200		
Ser Glu Arg Pro Ser Glu Thr Gln Ala Gly Arg Gln Arg Arg Thr 1205 1210 1215		
Ala Asp Asp Arg Glu His Ala Leu Glu Leu Asp Asp Trp Glu Val 1220 1225 1230		
Gly Cys Glu Asp Ala Trp Asp Ser Glu Glu Gly Gly Gly Asp Asp 1235 1240 1245		
Gly Asp Ala Pro Gly Ser Ser Phe Gly Val Ser Ile Val Ser Val 1250 1255 1260		
Ala Pro Gly Val Leu Arg Asp Arg Arg Val Gly Leu Arg Pro Ala		

1265

1270

1275

Val Lys Val Glu Leu Leu Ser Ser Ser Ser Ser Ser Glu Asp Glu
 1280 1285 1290

Asp Asp Val Trp Gly Gly Arg Gly Gly Arg Ser Pro Pro Gln Ser
 1295 1300 1305

Arg Gly
 1310

<210> 56
 <211> 467
 <212> PRT
 <213> Varicella zoster

<400> 56

Met Asp Thr Ile Leu Ala Gly Gly Ser Gly Thr Ser Asp Ala Ser Asp
 1 5 10 15

Asn Thr Cys Thr Ile Cys Met Ser Thr Val Ser Asp Leu Gly Lys Thr
 20 25 30

Met Pro Cys Leu His Asp Phe Cys Phe Val Cys Ile Arg Ala Trp Thr
 35 40 45

Ser Thr Ser Val Gln Cys Pro Leu Cys Arg Cys Pro Val Gln Ser Ile
 50 55 60

Leu His Lys Ile Val Ser Asp Thr Ser Tyr Lys Glu Tyr Glu Val His
 65 70 75 80

Pro Ser Asp Asp Asp Gly Phe Ser Glu Pro Ser Phe Glu Asp Ser Ile
 85 90 95

Asp Ile Leu Pro Gly Asp Val Ile Asp Leu Leu Pro Pro Ser Pro Gly
 100 105 110

Pro Ser Arg Glu Ser Ile Gln Gln Pro Thr Ser Arg Ser Ser Arg Glu
 115 120 125

Pro Ile Gln Ser Pro Asn Pro Gly Pro Leu Gln Ser Ser Ala Arg Glu
 130 135 140

Pro Thr Ala Glu Ser Pro Ser Asp Ser Gln Gln Asp Ser Ile Gln Pro
 145 150 155 160

373

Pro Thr Arg Asp Ser Ser Pro Gly Val Thr Lys Thr Cys Ser Thr Ala
165 170 175

Ser Phe Leu Arg Lys Val Phe Phe Lys Asp Gln Pro Ala Val Arg Ser
180 185 190

Ala Thr Pro Val Val Tyr Gly Ser Ile Glu Ser Ala Gln Gln Pro Arg
195 200 205

Thr Gly Gly Gln Asp Tyr Arg Asp Arg Pro Val Ser Val Gly Ile Asn
210 215 220

Gln Asp Pro Arg Thr Met Asp Arg Leu Pro Phe Arg Ala Thr Asp Arg
225 230 235 240

Gly Thr Glu Gly Asn Ala Arg Phe Pro Cys Tyr Met Gln Pro Leu Leu
245 250 255

Gly Trp Leu Asp Asp Gln Leu Ala Glu Leu Tyr Gln Pro Glu Ile Val
260 265 270

Glu Pro Thr Lys Met Leu Ile Leu Asn Tyr Ile Gly Ile Tyr Gly Arg
275 280 285

Asp Glu Ala Gly Leu Lys Thr Ser Leu Arg Cys Leu Leu His Asp Ser
290 295 300

Thr Gly Pro Phe Val Thr Asn Met Leu Phe Leu Leu Asp Arg Cys Thr
305 310 315 320

Asp Pro Thr Arg Leu Thr Met Gln Thr Trp Thr Trp Lys Asp Thr Ala
325 330 335

Ile Gln Leu Ile Thr Gly Pro Ile Val Arg Pro Glu Thr Thr Ser Thr
340 345 350

Gly Glu Thr Ser Arg Gly Asp Glu Arg Asp Thr Arg Leu Val Asn Thr
355 360 365

Pro Gln Lys Val Arg Leu Phe Ser Val Leu Pro Gly Ile Lys Pro Gly
370 375 380

Ser Ala Arg Gly Ala Lys Arg Arg Leu Phe His Thr Gly Arg Asp Val
385 390 395 400

Lys Arg Cys Leu Thr Ile Asp Leu Thr Ser Glu Ser Asp Ser Ala Cys
405 410 415

Lys Gly Ser Lys Thr Arg Lys Val Ala Ser Pro Gln Gly Glu Ser Asn
420 425 430

Thr Pro Ser Thr Ser Gly Ser Thr Ser Gly Ser Leu Lys His Leu Thr
435 440 445

Lys Lys Ser Ser Ala Gly Lys Ala Gly Lys Gly Ile Pro Asn Lys Met
450 455 460

Lys Lys Ser
465

<210> 57
<211> 305
<212> PRT
<213> Varicella zoster

<400> 57

Met Asp Val Ser Gly Glu Pro Thr Val Cys Ser Asn Ala Tyr Ala Asn
1 5 10 15

Glu Met Lys Leu Ser Asp Ser Lys Asp Ile Tyr Val Leu Ala His Pro
20 25 30

Val Thr Lys Lys Thr Arg Lys Arg Pro Arg Gly Leu Pro Leu Gly Val
35 40 45

Lys Leu Asp Pro Pro Thr Phe Lys Leu Asn Asn Met Ser His His Tyr
50 55 60

Asp Thr Glu Thr Phe Thr Pro Val Ser Ser Gln Leu Asp Ser Val Glu
65 70 75 80

Val Phe Ser Lys Phe Asn Ile Ser Pro Glu Trp Tyr Asp Leu Leu Ser
85 90 95

Asp Glu Leu Lys Glu Pro Tyr Ala Lys Gly Ile Phe Leu Glu Tyr Asn
100 105 110

Arg Leu Leu Asn Ser Gly Glu Glu Ile Leu Pro Ser Thr Gly Asp Ile
115 120 125

Phe Ala Trp Thr Arg Phe Cys Gly Pro Gln Ser Ile Arg Val Val Ile
130 135 140

Ile Gly Gln Asp Pro Tyr Pro Thr Ala Gly His Ala His Gly Leu Ala
145 150 155 160

Phe Ser Val Lys Arg Gly Ile Thr Pro Pro Ser Ser Leu Lys Asn Ile
165 170 175

Phe Ala Ala Leu Met Glu Ser Tyr Pro Asn Met Thr Pro Pro Thr His
180 185 190

Gly Cys Leu Glu Ser Trp Ala Arg Gln Gly Val Leu Leu Leu Asn Thr
195 200 205

Thr Leu Thr Val Arg Arg Gly Thr Pro Gly Ser His Val Tyr Leu Gly
210 215 220

Trp Gly Arg Leu Val Gln Arg Val Leu Gln Arg Leu Cys Glu Asn Arg
225 230 235 240

Thr Gly Leu Val Phe Met Leu Trp Gly Ala His Ala Gln Lys Thr Thr
245 250 255

Gln Pro Asn Ser Arg Cys His Leu Val Leu Thr His Ala His Pro Ser
260 265 270

Pro Leu Ser Arg Val Pro Phe Arg Asn Cys Arg His Phe Val Gln Ala
275 280 285

Asn Glu Tyr Phe Thr Arg Lys Gly Glu Pro Glu Ile Asp Trp Ser Val
290 295 300

Ile
305

<210> 58
<211> 71
<212> PRT
<213> Varicella zoster

<400> 58

Met Asp Val Arg Glu Arg Asn Val Phe Gly Asn Ala Ser Val Ala Thr
1 5 10 15

Pro Gly Glu His Gln Lys Phe Val Arg Glu Leu Ile Leu Ser Gly His
20 25 30

Asn Asn Val Val Leu Gln Thr Tyr Thr Gly Lys Trp Ser Asp Cys Arg
35 40 45

Lys His Gly Lys Ser Val Met Tyr Asn Thr Gly Glu Ala Arg His Pro
50 55 60

Thr Cys Lys Ala His Gln Arg
65 70

<210> 59
<211> 331
<212> PRT
<213> Varicella zoster

<400> 59

Met Gln Arg Ile Arg Pro Tyr Trp Ile Lys Phe Glu Gln Thr Gly Gly
1 5 10 15

Ala Gly Met Ala Asp Gly Met Ser Gly Ile Asn Ile Pro Ser Ile Leu
20 25 30

Gly Cys Ser Val Thr Ile Asp Asn Leu Leu Thr Arg Ala Glu Glu Gly
35 40 45

Leu Asp Val Ser Asp Val Ile Glu Asp Leu Arg Ile Gln Ala Ile Pro
50 55 60

Arg Phe Val Cys Glu Ala Arg Glu Val Thr Gly Leu Lys Pro Arg Phe
65 70 75 80

Leu Ala Asn Ser Val Val Ser Leu Arg Val Lys Pro Glu His Gln Glu
85 90 95

Thr Val Leu Val Val Leu Asn Gly Asp Ser Ser Glu Val Ser Cys Asp
100 105 110

Arg Tyr Tyr Met Glu Cys Val Thr Gln Pro Ala Phe Arg Gly Phe Ile
115 120 125

Phe Ser Val Leu Thr Ala Val Glu Asp Arg Val Tyr Thr Val Gly Val
130 135 140

Pro Pro Arg Leu Leu Ile Tyr Arg Met Thr Leu Phe Arg Pro Asp Asn
377

145 150 155 160

Val Leu Asp Phe Thr Leu Cys Val Ile Leu Met Tyr Leu Glu Gly Ile
165 170 175

Gly Pro Ser Gly Ala Ser Pro Ser Leu Phe Val Gln Leu Ser Val Tyr
180 185 190

Leu Arg Arg Val Glu Cys Gln Ile Gly Pro Leu Glu Lys Met Arg Arg
195 200 205

Phe Leu Tyr Glu Gly Val Leu Trp Leu Leu Asn Thr Leu Met Tyr Val
210 215 220

Val Asp Asn Asn Pro Phe Thr Lys Thr Arg Val Leu Pro His Tyr Met
225 230 235 240

Phe Val Lys Leu Leu Asn Pro Gln Pro Gly Thr Ala Pro Asn Ile Ile
245 250 255

Lys Ala Ile Tyr Ser Cys Gly Val Gly Gln Arg Phe Asp Leu Pro His
260 265 270

Gly Thr Pro Pro Cys Pro Asp Gly Val Val Gln Val Pro Pro Gly Leu
275 280 285

Leu Asn Gly Pro Leu Arg Asp Ser Glu Tyr Gln Lys Ser Val Tyr Phe
290 295 300

Trp Trp Leu Asn Arg Thr Met Val Thr Pro Lys Asn Val Gln Leu Phe
305 310 315 320

Glu Thr Tyr Lys Asn Ser Pro Arg Val Val Lys
325 330

<210> 60
<211> 541
<212> PRT
<213> Varicella zoster

<400> 60

Met Glu Phe Pro Tyr His Ser Thr Val Ser Tyr Asn Gly Val Thr Phe
1 5 10 15

Tyr Phe Asn Glu Arg Ala Thr Arg Ala Tyr Phe Ile Cys Gly Gly Cys
20 25 30

Leu Ile Ser Ile Pro Arg Lys His Gly Gly Glu Ile Ala Lys Phe Gly
35 40 45

His Val Val Arg Gly Val Gly Pro Gly Asp Arg Ser Val Ala Ser Tyr
50 55 60

Val Arg Ser Glu Leu Asn Arg Thr Gly Lys Thr Trp Ala Val Ser Ser
65 70 75 80

Asn Asn Asn Cys Val Phe Leu Asp Arg Val Ala Leu Leu Ala Ala Gly
85 90 95

Ser Gly Ala Val Asp Arg Asp Leu Cys Gly Thr Phe Asp Val Glu Val
100 105 110

Glu Asp Pro Thr Leu Ala Asp Tyr Leu Val Ser Leu Pro Val Thr His
115 120 125

Leu Thr Leu Val Ala Gly Val Asp Val Thr Arg Glu Asn Lys Leu Lys
130 135 140

Leu Phe Pro Thr Pro Thr Ala Ile Asn Thr Thr Asn Gly Phe Met Tyr
145 150 155 160

Val Pro Asn Glu Ala Ser Phe Ser Leu Val Tyr Met Arg Met Leu Glu
165 170 175

Leu Pro Glu Ser Leu Gln Glu Leu Val Ser Gly Leu Phe Asp Gly Thr
180 185 190

Pro Glu Ile Arg Asp Ala Leu Asn Gly Ser Asn Asp Asp Glu Lys Thr
195 200 205

Ser Ile Ile Val Ser Arg Arg Ala Ala Asp Val Val Thr Glu Asp Val
210 215 220

Lys Ala Asp Asp Val Pro Ile Ser Gly Glu Pro Tyr Ser Glu Lys Gln
225 230 235 240

Pro Arg Arg Arg Lys Lys Ser Asp His Ile Thr Leu Ser Asn Phe Val
245 250 255

Gln Ile Arg Thr Ile Pro Arg Val Met Asp Ile Trp Asp Pro Arg His
260 265 270

Lys Ala Thr Thr His Cys Ile Arg Ala Leu Ser Cys Ala Val Phe Phe
275 280 285

Ala Asp Glu Val Ile Phe Lys Ala Arg Lys Trp Pro Gly Leu Glu Asp
290 295 300

Glu Leu Asn Glu Ala Arg Glu Thr Ile Tyr Thr Ala Val Val Ala Val
305 310 315 320

Tyr Gly Glu Arg Gly Glu Leu Pro Phe Phe Gly His Ala Tyr Gly Arg
325 330 335

Asp Leu Thr Ser Cys Gln Arg Phe Val Ile Val Gln Tyr Ile Leu Ser
340 345 350

Arg Trp Glu Ala Phe Asn Cys Tyr Ala Val Ile Glu Asp Leu Thr Arg
355 360 365

Ser Tyr Val Asn Ala Leu Pro Ser Asp Asp Asp Thr Asp Gln Val Ala
370 375 380

Gln Asp Leu Ile Arg Thr Ile Val Asp Thr Ala Asn Ser Leu Leu Arg
385 390 395 400

Glu Val Gly Phe Ile Gly Thr Leu Ala Glu Thr Leu Leu Phe Leu Pro
405 410 415

Leu Pro Gln Leu Pro Cys Tyr Lys Glu Thr Ser His Leu Ala Lys Lys
420 425 430

Glu Gly Val Arg Ile Leu Arg Leu Ala Lys Thr Gly Val Gly Leu Ser
435 440 445

Asp Thr Val Pro Val Asp Val Ser Val Thr Glu Arg His Glu Tyr Glu
450 455 460

Ile Ser Arg Tyr Leu Asp Thr Leu Tyr Ser Gly Asp Pro Cys Tyr Asn
465 470 475 480

Gly Ala Val Arg Leu Cys Arg Leu Leu Gly Ser Ser Ile Pro Ile Ala
485 490 495

Leu Tyr Tyr Asn Thr Ile Ser Gly Asn Ala Phe Glu Pro Tyr Phe Ala
500 505 510

Gly Arg Arg Tyr Ile Ala Tyr Leu Gly Ala Leu Phe Phe Gly Arg Val
515 520 525

His Gln Thr Pro Phe Gly Asp Gly Lys Lys Thr Gln Arg
530 535 540

<210> 61
<211> 258
<212> PRT
<213> Varicella zoster

<400> 61

Met Ser Ala Ser Arg Ile Arg Ala Lys Cys Phe Arg Leu Gly Gln Arg
1 5 10 15

Cys His Thr Arg Phe Tyr Asp Val Leu Lys Lys Asp Ile Asp Asn Val
20 25 30

Arg Arg Gly Phe Ala Asp Ala Phe Asn Pro Arg Leu Ala Lys Leu Leu
35 40 45

Ser Pro Leu Ser His Val Asp Val Gln Arg Ala Val Arg Ile Ser Met
50 55 60

Ser Phe Glu Val Asn Leu Gly Arg Arg Arg Pro Asp Cys Val Cys Ile
65 70 75 80

Ile Gln Thr Glu Ser Ser Gly Ala Gly Lys Thr Val Cys Phe Ile Val
85 90 95

Glu Leu Lys Ser Cys Arg Phe Ser Ala Asn Ile His Thr Pro Thr Lys
100 105 110

Tyr His Gln Phe Cys Glu Gly Met Arg Gln Leu Arg Asp Thr Met Ala
115 120 125

Leu Ile Lys Glu Thr Thr Pro Thr Gly Ser Asp Glu Ile Met Val Thr
130 135 140

Pro Leu Leu Val Phe Val Ser Gln Arg Gly Leu Asn Leu Leu Gln Val
145 150 155 160

Thr Arg Leu Pro Pro Lys Val Ile His Gly Asn Leu Val Met Leu Ala
165 170 175

Ser His Leu Glu Asn Val Ala Glu Tyr Thr Pro Pro Ile Arg Ser Val
180 185 190

Arg Glu Arg Arg Arg Leu Cys Lys Lys Lys Ile His Val Cys Ser Leu
195 200 205

Ala Lys Lys Arg Ala Lys Ser Cys His Arg Ser Ala Leu Thr Lys Phe
210 215 220

Glu Glu Asn Ala Ala Cys Gly Val Asp Leu Pro Leu Arg Arg Pro Ser
225 230 235 240

Leu Gly Ala Cys Gly Gly Ile Leu Gln Ser Ile Thr Gly Met Phe Ser
245 250 255

His Gly

<210> 62
<211> 579
<212> PRT
<213> Varicella zoster

<400> 62

Met Thr Ala Arg Tyr Gly Phe Gly Ser Ile Ser Phe Pro Asn Lys Cys
1 5 10 15

Gly Ile Phe Leu Ser Thr Thr Lys Asn Phe Ile Ala Pro Asn Phe Pro
20 25 30

Ile His Tyr Trp Thr Ala Pro Ala Phe Glu Leu Arg Gly Arg Met Asn
35 40 45

Pro Asp Leu Glu Lys Asn Thr Leu Thr Leu Lys Asn Ala Ala Ala Val
50 55 60

Ala Ala Leu Asp Asn Leu Arg Gly Glu Thr Ile Thr Leu Pro Thr Glu
65 70 75 80

Ile Asp Arg Arg Leu Lys Pro Leu Glu Glu Gln Leu Thr Arg Met Ala
85 90 95

Lys Val Leu Asp Ser Leu Glu Thr Ala Ala Ala Glu Ala Glu Glu Ala
100 105 110

Asp	Ala	Gln	Ser	Glu	Glu	Cys	Thr	Arg	Thr	Glu	Ile	Ile	Arg	Asn	Glu	115	120	125
Ser	Ile	His	Pro	Glu	Val	Gln	Ile	Ala	Lys	Asn	Asp	Ala	Pro	Leu	Gln	130	135	140
Tyr	Asp	Thr	Asn	Phe	Gln	Val	Asp	Phe	Ile	Thr	Leu	Val	Tyr	Leu	Gly	145	150	155
Arg	Ala	Arg	Gly	Asn	Asn	Ser	Pro	Gly	Ile	Val	Phe	Gly	Pro	Trp	Tyr	165	170	175
Arg	Thr	Leu	Gln	Glu	Arg	Leu	Val	Leu	Asp	Arg	Pro	Val	Ala	Ala	Arg	180	185	190
Gly	Val	Asp	Cys	Lys	Asp	Gly	Arg	Ile	Ser	Arg	Thr	Phe	Met	Asn	Thr	195	200	205
Thr	Val	Thr	Cys	Leu	Gln	Ser	Ala	Gly	Arg	Met	Tyr	Val	Gly	Asp	Arg	210	215	220
Ala	Tyr	Ser	Ala	Phe	Glu	Cys	Ala	Val	Leu	Cys	Leu	Tyr	Leu	Met	Tyr	225	230	235
Arg	Thr	Ser	Asn	Ser	Val	His	Glu	Pro	Gln	Val	Ser	Ser	Phe	Gly	Asn	245	250	255
Leu	Ile	Glu	His	Leu	Pro	Glu	Tyr	Thr	Glu	Thr	Phe	Val	Asn	Tyr	Met	260	265	270
Thr	Thr	His	Glu	Asn	Lys	Asn	Ser	Tyr	Gln	Phe	Cys	Tyr	Asp	Arg	Leu	275	280	285
Pro	Arg	Asp	Gln	Phe	His	Ala	Arg	Gly	Gly	Arg	Tyr	Asp	Gln	Gly	Ala	290	295	300
Leu	Thr	Ser	His	Ser	Val	Met	Asp	Ala	Leu	Ile	Arg	Leu	Gln	Val	Leu	305	310	315
Pro	Pro	Ala	Pro	Gly	Gln	Phe	Asn	Pro	Gly	Val	Asn	Asp	Ile	Ile	Asp	325	330	335
Arg	Asn	His	Thr	Ala	Tyr	Val	Asp	Lys	Ile	Gln	Gln	Ala	Ala	Ala	Ala	340	345	350

Tyr Leu Glu Arg Ala Gln Asn Val Phe Leu Met Glu Asp Gln Thr Leu
 355 360 365

Leu Arg Leu Thr Ile Asp Thr Ile Thr Ala Leu Leu Leu Leu Arg Arg
 370 375 380

Leu Leu Trp Asn Gly Asn Val Tyr Gly Asp Lys Leu Lys Asn Asn Phe
 385 390 395 400

Gln Leu Gly Leu Ile Val Ser Glu Ala Thr Gly Thr Pro Thr Asn Asn
 405 410 415

Val Ile Leu Arg Gly Ala Thr Gly Phe Asp Gly Lys Phe Lys Ser Gly
 420 425 430

Asn Asn Asn Phe Gln Phe Leu Cys Glu Arg Tyr Ile Ala Pro Leu Tyr
 435 440 445

Thr Leu Asn Arg Thr Thr Glu Leu Thr Glu Met Phe Pro Gly Leu Val
 450 455 460

Ala Leu Cys Leu Asp Ala His Thr Gln Leu Ser Arg Gly Ser Leu Gly
 465 470 475 480

Arg Thr Val Ile Asp Ile Ser Ser Gly Gln Tyr Gln Asp Arg Leu Ile
 485 490 495

Ser Leu Ile Ala Leu Glu Leu Glu His Arg Arg Gln Asn Val Thr Ser
 500 505 510

Leu Pro Ile Ala Ala Val Val Ser Ile His Asp Ser Val Met Leu Gln
 515 520 525

Tyr Glu Arg Gly Leu Gly Met Leu Met His Gln Pro Arg Val Arg Ala
 530 535 540

Ala Leu Glu Glu Ser Arg Arg Leu Ala Gln Phe Asn Val Asn Ser Asp
 545 550 555 560

Tyr Asp Leu Leu Tyr Phe Val Cys Leu Gly Val Ile Pro Gln Phe Ala
 565 570 575

Ser Thr Pro

<210> 63
<211> 605
<212> PRT
<213> Varicella zoster

<400> 63

Met Ala Ala Glu Ala Asp Glu Glu Asn Cys Glu Ala Leu Tyr Val Ala
1 5 10 15

Gly Tyr Leu Ala Leu Tyr Ser Lys Asp Glu Gly Glu Leu Asn Ile Thr
20 25 30

Pro Glu Ile Val Arg Ser Ala Leu Pro Pro Thr Ser Lys Ile Pro Ile
35 40 45

Asn Ile Asp His Arg Lys Asp Cys Val Val Gly Glu Val Ile Ala Ile
50 55 60

Ile Glu Asp Ile Arg Gly Pro Phe Phe Leu Gly Ile Val Arg Cys Pro
65 70 75 80

Gln Leu His Ala Val Leu Phe Glu Ala Ala His Ser Asn Phe Phe Gly
85 90 95

Asn Arg Asp Ser Val Leu Ser Pro Leu Glu Arg Ala Leu Tyr Leu Val
100 105 110

Thr Asn Tyr Leu Pro Ser Val Ser Leu Ser Ser Lys Arg Leu Ser Pro
115 120 125

Asn Glu Ile Pro Asp Gly Asn Phe Phe Thr His Val Ala Leu Cys Val
130 135 140

Val Gly Arg Arg Val Gly Thr Val Val Asn Tyr Asp Cys Thr Pro Glu
145 150 155 160

Ser Ser Ile Glu Pro Phe Arg Val Leu Ser Met Glu Ser Lys Ala Arg
165 170 175

Leu Leu Ser Leu Val Lys Asp Tyr Ala Gly Leu Asn Lys Val Trp Lys
180 185 190

Val Ser Glu Asp Lys Leu Ala Lys Val Leu Leu Ser Thr Ala Val Asn
195 200 205

Asn Met Leu Leu Arg Asp Arg Trp Asp Val Val Ala Lys Arg Arg Arg
385

210

215

220

Glu Ala Gly Ile Met Gly His Val Tyr Leu Gln Ala Ser Thr Gly Tyr
 225 230 235 240

Gly Leu Ala Arg Ile Thr Asn Val Asn Gly Val Glu Ser Lys Leu Pro
 245 250 255

Asn Ala Gly Val Ile Asn Ala Thr Phe His Pro Gly Gly Pro Ile Tyr
 260 265 270

Asp Leu Ala Leu Gly Val Gly Glu Ser Asn Glu Asp Cys Glu Lys Thr
 275 280 285

Val Pro His Leu Lys Val Thr Gln Leu Cys Arg Asn Asp Ser Asp Met
 290 295 300

Ala Ser Val Ala Gly Asn Ala Ser Asn Ile Ser Pro Gln Pro Pro Ser
 305 310 315 320

Gly Val Pro Thr Gly Gly Glu Phe Val Leu Ile Pro Thr Ala Tyr Tyr
 325 330 335

Ser Gln Leu Leu Thr Gly Gln Thr Lys Asn Pro Gln Val Ser Ile Gly
 340 345 350

Ala Pro Asn Asn Gly Gln Tyr Ile Val Gly Pro Tyr Gly Ser Pro His
 355 360 365

Pro Pro Ala Phe Pro Pro Asn Thr Gly Gly Tyr Gly Cys Pro Pro Gly
 370 375 380

His Phe Gly Gly Pro Tyr Gly Phe Pro Gly Tyr Pro Pro Pro Asn Arg
 385 390 395 400

Leu Glu Met Gln Met Ser Ala Phe Met Asn Ala Leu Ala Ala Glu Arg
 405 410 415

Gly Ile Asp Leu Gln Thr Pro Cys Val Asn Phe Pro Asp Lys Thr Asp
 420 425 430

Val Arg Arg Pro Gly Lys Arg Asp Phe Lys Ser Met Asp Gln Arg Glu
 435 440 445

Leu Asp Ser Phe Tyr Ser Gly Glu Ser Gln Met Asp Gly Glu Phe Pro
 386

450

455

460

Ser Asn Ile Tyr Phe Pro Gly Glu Pro Thr Tyr Ile Thr His Arg Arg
 465 470 475 480

Arg Arg Val Ser Pro Ser Tyr Trp Gln Arg Arg His Arg Val Ser Asn
 485 490 495

Gly Gln His Glu Glu Leu Ala Gly Val Val Ala Lys Leu Gln Gln Glu
 500 505 510

Val Thr Glu Leu Lys Ser Gln Asn Gly Thr Gln Met Pro Leu Ser His
 515 520 525

His Thr Asn Ile Pro Glu Gly Thr Arg Asp Pro Arg Ile Ser Ile Leu
 530 535 540

Leu Lys Gln Leu Gln Ser Val Ser Gly Leu Cys Ser Ser Gln Asn Thr
 545 550 555 560

Thr Ser Thr Pro His Thr Asp Thr Val Gly Gln Asp Val Asn Ala Val
 565 570 575

Glu Ala Ser Ser Lys Ala Pro Leu Ile Gln Gly Ser Thr Ala Asp Asp
 580 585 590

Ala Asp Met Phe Ala Asn Gln Met Met Val Gly Arg Cys
 595 600 605

<210> 64
 <211> 1194
 <212> PRT
 <213> Varicella zoster

<400> 64

Met Ala Ile Arg Thr Gly Phe Cys Asn Pro Phe Leu Thr Gln Ala Ser
 1 5 10 15

Gly Ile Lys Tyr Asn Pro Arg Thr Gly Arg Gly Ser Asn Arg Glu Phe
 20 25 30

Leu His Ser Tyr Lys Thr Thr Met Ser Ser Phe Gln Phe Leu Ala Pro
 35 40 45

Lys Cys Leu Asp Glu Asp Val Pro Met Glu Glu Arg Lys Gly Val His
 50 55 60

Val Gly Thr Leu Ser Arg Pro Pro Lys Val Tyr Cys Asn Gly Lys Glu
65 70 75 80

Val Pro Ile Leu Asp Phe Arg Cys Ser Ser Pro Trp Pro Arg Arg Val
85 90 95

Asn Ile Trp Gly Glu Ile Asp Phe Arg Gly Asp Lys Phe Asp Pro Arg
100 105 110

Phe Asn Thr Phe His Val Tyr Asp Ile Val Glu Thr Thr Glu Ala Ala
115 120 125

Ser Asn Gly Asp Val Ser Arg Phe Ala Thr Ala Thr Arg Pro Leu Gly
130 135 140

Thr Val Ile Thr Leu Leu Gly Met Ser Arg Cys Gly Lys Arg Val Ala
145 150 155 160

Val His Val Tyr Gly Ile Cys Gln Tyr Phe Tyr Ile Asn Lys Ala Glu
165 170 175

Val Asp Thr Ala Cys Gly Ile Arg Ser Gly Ser Glu Leu Ser Val Leu
180 185 190

Leu Ala Glu Cys Leu Arg Ser Ser Met Ile Thr Gln Asn Asp Ala Thr
195 200 205

Leu Asn Gly Asp Lys Asn Ala Phe His Gly Thr Ser Phe Lys Ser Ala
210 215 220

Ser Pro Glu Ser Phe Arg Val Glu Val Ile Glu Arg Thr Asp Val Tyr
225 230 235 240

Tyr Tyr Asp Thr Gln Pro Cys Ala Phe Tyr Arg Val Tyr Ser Pro Ser
245 250 255

Ser Lys Phe Thr Asn Tyr Leu Cys Asp Asn Phe His Pro Glu Leu Lys
260 265 270

Lys Tyr Glu Gly Arg Val Asp Ala Thr Thr Arg Phe Leu Met Asp Asn
275 280 285

Pro Gly Phe Val Ser Phe Gly Trp Tyr Gln Leu Lys Pro Gly Val Asp
290 295 300

Gly Glu Arg Val Arg Val Arg Pro Ala Ser Arg Gln Leu Thr Leu Ser
 305 310 315 320
 Asp Val Glu Ile Asp Cys Met Ser Asp Asn Leu Gln Ala Ile Pro Asn
 325 330 335
 Asp Asp Ser Trp Pro Asp Tyr Lys Leu Leu Cys Phe Asp Ile Glu Cys
 340 345 350
 Lys Ser Gly Gly Ser Asn Glu Leu Ala Phe Pro Asp Ala Thr His Leu
 355 360 365
 Glu Asp Leu Val Ile Gln Ile Ser Cys Leu Leu Tyr Ser Ile Pro Arg
 370 375 380
 Gln Ser Leu Glu His Ile Leu Leu Phe Ser Leu Gly Ser Cys Asp Leu
 385 390 395 400
 Pro Gln Arg Tyr Val Gln Glu Met Lys Asp Ala Gly Leu Pro Glu Pro
 405 410 415
 Thr Val Leu Glu Phe Asp Ser Glu Phe Glu Leu Leu Ile Ala Phe Met
 420 425 430
 Thr Leu Val Lys Gln Tyr Ala Pro Glu Phe Ala Thr Gly Tyr Asn Ile
 435 440 445
 Val Asn Phe Asp Trp Ala Phe Ile Met Glu Lys Leu Asn Ser Ile Tyr
 450 455 460
 Ser Leu Lys Leu Asp Gly Tyr Gly Ser Ile Asn Arg Gly Gly Leu Phe
 465 470 475 480
 Lys Ile Trp Asp Val Gly Lys Ser Gly Phe Gln Arg Arg Ser Lys Val
 485 490 495
 Lys Ile Asn Gly Leu Ile Ser Leu Asp Met Tyr Ala Ile Ala Thr Glu
 500 505 510
 Lys Leu Lys Leu Ser Ser Tyr Lys Leu Asp Ser Val Ala Arg Glu Ala
 515 520 525
 Leu Asn Glu Ser Lys Arg Asp Leu Pro Tyr Lys Asp Ile Pro Gly Tyr
 530 535 540

Tyr Ala Ser Gly Pro Asn Thr Arg Gly Ile Ile Gly Glu Tyr Cys Ile
545 550 555 560

Gln Asp Ser Ala Leu Val Gly Lys Leu Phe Phe Lys Tyr Leu Pro His
565 570 575

Leu Glu Leu Ser Ala Val Ala Arg Leu Ala Arg Ile Thr Leu Thr Lys
580 585 590

Ala Ile Tyr Asp Gly Gln Gln Val Arg Ile Tyr Thr Cys Leu Leu Gly
595 600 605

Leu Ala Ser Ser Arg Gly Phe Ile Leu Pro Asp Gly Gly Tyr Pro Ala
610 615 620

Thr Phe Glu Tyr Lys Asp Val Ile Pro Asp Val Gly Asp Val Glu Glu
625 630 635 640

Glu Met Asp Glu Asp Glu Ser Val Ser Pro Thr Gly Thr Ser Ser Gly
645 650 655

Arg Asn Val Gly Tyr Lys Gly Ala Arg Val Phe Asp Pro Asp Thr Gly
660 665 670

Phe Tyr Ile Asp Pro Val Val Val Leu Asp Phe Ala Ser Leu Tyr Pro
675 680 685

Ser Ile Ile Gln Ala His Asn Leu Cys Phe Thr Thr Leu Thr Leu Asn
690 695 700

Phe Glu Thr Val Lys Arg Leu Asn Pro Ser Asp Tyr Ala Thr Phe Thr
705 710 715 720

Val Gly Gly Lys Arg Leu Phe Phe Val Arg Ser Asn Val Arg Glu Ser
725 730 735

Leu Leu Gly Val Leu Leu Lys Asp Trp Leu Ala Met Arg Lys Ala Ile
740 745 750

Arg Ala Arg Ile Pro Gly Ser Ser Ser Asp Glu Ala Val Leu Leu Asp
755 760 765

Lys Gln Gln Ala Ala Ile Lys Val Val Cys Asn Ser Val Tyr Gly Phe
770 775 780

Thr Gly Val Ala Gln Gly Phe Leu Pro Cys Leu Tyr Val Ala Ala Thr
785 790 795 800

Val Thr Thr Ile Gly Arg Gln Met Leu Leu Ser Thr Arg Asp Tyr Ile
805 810 815

His Asn Asn Trp Ala Ala Phe Glu Arg Phe Ile Thr Ala Phe Pro Asp
820 825 830

Ile Glu Ser Ser Val Leu Ser Gln Lys Ala Tyr Glu Val Lys Val Ile
835 840 845

Tyr Gly Asp Thr Asp Ser Val Phe Ile Arg Phe Lys Gly Val Ser Val
850 855 860

Glu Gly Ile Ala Lys Ile Gly Glu Lys Met Ala His Ile Ile Ser Thr
865 870 875 880

Ala Leu Phe Cys Pro Pro Ile Lys Leu Glu Cys Glu Lys Thr Phe Ile
885 890 895

Lys Leu Leu Leu Ile Thr Lys Lys Lys Tyr Ile Gly Val Ile Tyr Gly
900 905 910

Gly Lys Val Leu Met Lys Gly Val Asp Leu Val Arg Lys Asn Asn Cys
915 920 925

Gln Phe Ile Asn Asp Tyr Ala Arg Lys Leu Val Glu Leu Leu Leu Tyr
930 935 940

Asp Asp Thr Val Ser Arg Ala Ala Ala Glu Ala Ser Cys Val Ser Ile
945 950 955 960

Ala Glu Trp Asn Arg Arg Ala Met Pro Ser Gly Met Ala Gly Phe Gly
965 970 975

Arg Ile Ile Ala Asp Ala His Arg Gln Ile Thr Ser Pro Lys Leu Asp
980 985 990

Ile Asn Lys Phe Val Met Thr Ala Glu Leu Ser Arg Pro Pro Ser Ala
995 1000 1005

Tyr Ile Asn Arg Arg Leu Ala His Leu Thr Val Tyr Tyr Lys Leu
1010 1015 1020

Val	Met	Arg	Gln	Gly	Gln	Ile	Pro	Asn	Val	Arg	Glu	Arg	Ile	Pro
	1025					1030					1035			
Tyr	Val	Ile	Val	Ala	Pro	Thr	Asp	Glu	Val	Glu	Ala	Asp	Ala	Lys
	1040					1045					1050			
Ser	Val	Ala	Leu	Leu	Arg	Gly	Asp	Pro	Leu	Gln	Asn	Thr	Ala	Gly
	1055					1060					1065			
Lys	Arg	Cys	Gly	Glu	Ala	Lys	Arg	Lys	Leu	Ile	Ile	Ser	Asp	Leu
	1070					1075					1080			
Ala	Glu	Asp	Pro	Ile	His	Val	Thr	Ser	His	Gly	Leu	Ser	Leu	Asn
	1085					1090					1095			
Ile	Asp	Tyr	Tyr	Phe	Ser	His	Leu	Ile	Gly	Thr	Ala	Ser	Val	Thr
	1100					1105					1110			
Phe	Lys	Ala	Leu	Phe	Gly	Asn	Asp	Thr	Lys	Leu	Thr	Glu	Arg	Leu
	1115					1120					1125			
Leu	Lys	Arg	Phe	Ile	Pro	Glu	Thr	Arg	Val	Val	Asn	Val	Lys	Met
	1130					1135					1140			
Leu	Asn	Arg	Leu	Gln	Ala	Ala	Gly	Phe	Val	Cys	Ile	His	Ala	Pro
	1145					1150					1155			
Cys	Trp	Asp	Asn	Lys	Met	Asn	Thr	Glu	Ala	Glu	Ile	Thr	Glu	Glu
	1160					1165					1170			
Glu	Gln	Ser	His	Gln	Ile	Met	Arg	Arg	Val	Phe	Cys	Ile	Pro	Lys
	1175					1180					1185			
Ala	Ile	Leu	His	Gln	Ser									
	1190													
<210>	65													
<211>	156													
<212>	PRT													
<213>	Varicella zoster													
<400>	65													
Met	Tyr	Glu	Ser	Glu	Asn	Ala	Ser	Glu	His	His	Pro	Glu	Leu	Glu
1				5					10				15	Asp

Val Phe Ser Glu Asn Thr Gly Asp Ser Asn Pro Ser Met Gly Ser Ser
20 25 30

Asp Ser Thr Arg Ser Ile Ser Gly Met Arg Ala Arg Asp Leu Ile Thr
35 40 45

Asp Thr Asp Val Asn Leu Leu Asn Ile Asp Ala Leu Glu Ser Lys Tyr
50 55 60

Phe Pro Ala Asp Ser Thr Phe Thr Leu Ser Val Trp Phe Glu Asn Leu
65 70 75 80

Ile Pro Pro Glu Ile Glu Ala Ile Leu Pro Thr Thr Asp Ala Gln Leu
85 90 95

Asn Tyr Ile Ser Phe Thr Ser Arg Leu Ala Ser Val Leu Lys His Lys
100 105 110

Glu Ser Asn Asp Ser Glu Lys Ser Ala Tyr Val Val Pro Cys Glu His
115 120 125

Ser Ala Ser Val Thr Arg Arg Arg Glu Arg Phe Ala Gly Val Met Ala
130 135 140

Lys Phe Leu Asp Leu His Glu Ile Leu Lys Asp Ala
145 150 155

<210> 66
<211> 269
<212> PRT
<213> Varicella zoster

<400> 66

Met Ser Arg Arg Thr Tyr Val Arg Ser Glu Arg Arg Arg Gly Cys Gly
1 5 10 15

Asp Asn Leu Leu Gln Arg Ile Arg Leu Val Val Pro Ser Ala Leu Gln
20 25 30

Cys Cys Asp Gly Asp Leu Pro Ile Phe Asp Pro Gln Arg Pro Pro Ala
35 40 45

Arg Cys Val Phe Gln Phe Asn Gly Glu Asp Asn Val Ser Glu Ala Phe
50 55 60

Pro Val Glu Tyr Ile Met Arg Leu Met Ala Asn Trp Ala Gln Val Asp
65 70 75 80

Cys Asp Pro Tyr Ile Lys Ile Gln Asn Thr Gly Val Ser Val Leu Phe
85 90 95

Gln Gly Phe Phe Phe Arg Pro Thr Asn Ala Pro Val Ala Glu Val Ser
100 105 110

Ile Asp Ser Asn Asn Val Ile Leu Ser Ser Thr Leu Ser Thr Gly Ile
115 120 125

Asn Leu Ser Ala Leu Glu Ser Ile Lys Arg Gly Gly Gly Ile Asp Arg
130 135 140

Arg Pro Leu Gln Ala Leu Met Trp Val Asn Cys Phe Val Arg Met Pro
145 150 155 160

Tyr Val Gln Leu Ser Phe Arg Phe Met Gly Pro Glu Asp Pro Ser Arg
165 170 175

Thr Ile Lys Leu Met Ala Arg Ala Thr Asp Ala Tyr Met Tyr Lys Glu
180 185 190

Thr Gly Asn Asn Leu Asp Glu Tyr Ile Arg Trp Arg Pro Ser Phe Arg
195 200 205

Ser Pro Pro Glu Asn Gly Ser Pro Asn Thr Ser Val Gln Met Gln Ser
210 215 220

Asp Ile Lys Pro Ala Leu Pro Asp Thr Gln Thr Thr Arg Val Trp Lys
225 230 235 240

Leu Ala Leu Pro Val Ala Asn Val Thr Tyr Ala Leu Phe Ile Val Ile
245 250 255

Val Leu Val Val Val Leu Gly Ala Val Leu Phe Trp Lys
260 265

<210> 67
<211> 235
<212> PRT
<213> Varicella zoster

<400> 67

Met Thr Gln Pro Ala Ser Ser Arg Val Val Phe Asp Pro Ser Asn Pro
394

1	5	10	15
Thr Thr Phe Ser Val Glu Ala Ile Ala Ala Tyr Thr Pro Val Ala Leu	20	25	30
Ile Arg Leu Leu Asn Ala Ser Gly Pro Leu Gln Pro Gly His Arg Val	35	40	45
Asp Ile Ala Asp Ala Arg Ser Ile Tyr Thr Val Gly Ala Ala Ala Ser	50	55	60
Ala Ala Arg Ala Arg Ala Asn His Asn Ala Asn Thr Ile Arg Arg Thr	65	70	80
Ala Met Phe Ala Glu Thr Asp Pro Met Thr Trp Leu Arg Pro Thr Val	85	90	95
Gly Leu Lys Arg Thr Phe Asn Pro Arg Ile Ile Arg Pro Gln Pro Pro	100	105	110
Asn Pro Ser Met Ser Leu Gly Ile Ser Gly Pro Thr Ile Leu Pro Gln	115	120	125
Lys Thr Gln Ser Ala Asp Gln Ser Ala Leu Gln Gln Pro Ala Ala Leu	130	135	140
Ala Phe Ser Gly Ser Ser Pro Gln His Pro Pro Pro Gln Thr Thr Ser	145	150	155
Ala Ser Val Gly Gln Gln Gln His Val Val Ser Gly Ser Ser Gly Gln	165	170	175
Gln Pro Gln Gln Gly Ala Gln Ser Ser Thr Val Gln Pro Thr Thr Gly	180	185	190
Ser Pro Pro Ala Ala Gln Gly Val Pro Gln Ser Thr Pro Pro Pro Thr	195	200	205
Gln Asn Thr Pro Gln Gly Gly Lys Gly Gln Thr Leu Ser His Thr Gly	210	215	220
Gln Ser Gly Asn Ala Ser Arg Ser Arg Arg Val	225	230	235

<210> 68

<211> 483
 <212> PRT
 <213> Varicella zoster

<400> 68

Met Gly Ser Gln Pro Thr Asn Ser His Phe Thr Leu Asn Glu Gln Thr
 1 5 10 15

Leu Cys Gly Thr Asn Ile Ser Leu Leu Gly Asn Asn Arg Phe Ile Gln
 20 25 30

Ile Gly Asn Gly Leu His Met Thr Tyr Ala Pro Gly Phe Phe Gly Asn
 35 40 45

Trp Ser Arg Asp Leu Thr Ile Gly Pro Arg Phe Gly Gly Leu Asn Lys
 50 55 60

Gln Pro Ile His Val Pro Pro Lys Arg Thr Glu Thr Ala Ser Ile Gln
 65 70 75 80

Val Thr Pro Arg Ser Ile Val Ile Asn Arg Met Asn Asn Ile Gln Ile
 85 90 95

Asn Pro Thr Ser Ile Gly Asn Pro Gln Val Thr Ile Arg Leu Pro Leu
 100 105 110

Asn Asn Phe Lys Ser Thr Thr Gln Leu Ile Gln Gln Val Ser Leu Thr
 115 120 125

Asp Phe Phe Arg Pro Asp Ile Glu His Ala Gly Ser Ile Val Leu Ile
 130 135 140

Leu Arg His Pro Ser Asp Met Ile Gly Glu Ala Asn Thr Leu Thr Gln
 145 150 155 160

Ala Gly Arg Asp Pro Asp Val Leu Leu Glu Gly Leu Arg Asn Leu Phe
 165 170 175

Asn Ala Cys Thr Ala Pro Trp Thr Val Gly Glu Gly Gly Gly Leu Arg
 180 185 190

Ala Tyr Val Thr Ser Leu Ser Phe Ile Ala Ala Cys Arg Ala Glu Glu
 195 200 205

Tyr Thr Asp Lys Gln Ala Ala Asp Ala Asn Arg Thr Ala Ile Val Ser
 210 215 220

Ala Tyr Gly Cys Ser Arg Met Glu Thr Arg Leu Ile Arg Phe Ser Glu
 225 230 235 240

Cys Leu Arg Ala Met Val Gln Cys His Val Phe Pro His Arg Phe Ile
 245 250 255

Ser Phe Phe Gly Ser Leu Leu Glu Tyr Thr Ile Gln Asp Asn Leu Cys
 260 265 270

Asn Ile Thr Ala Val Ala Lys Gly Pro Gln Glu Ala Ala Arg Thr Asp
 275 280 285

Lys Thr Ser Thr Arg Arg Val Thr Ala Asn Ile Pro Ala Cys Val Phe
 290 295 300

Trp Asp Val Asp Lys Asp Leu His Leu Ser Ala Asp Gly Leu Lys His
 305 310 315 320

Val Phe Leu Val Phe Val Tyr Thr Gln Arg Arg Gln Arg Glu Gly Val
 325 330 335

Arg Leu His Leu Ala Leu Ser Gln Leu Asn Glu Gln Cys Phe Gly Arg
 340 345 350

Gly Ile Gly Phe Leu Leu Gly Arg Ile Arg Ala Glu Asn Ala Ala Trp
 355 360 365

Gly Thr Glu Gly Val Ala Asn Thr His Gln Pro Tyr Asn Thr Arg Ala
 370 375 380

Leu Pro Leu Val Gln Leu Ser Asn Asp Pro Thr Ser Pro Arg Cys Ser
 385 390 395 400

Ile Gly Glu Ile Thr Gly Val Asn Trp Asn Leu Ala Arg Gln Arg Leu
 405 410 415

Tyr Gln Trp Thr Gly Asp Phe Arg Gly Leu Pro Thr Gln Leu Ser Cys
 420 425 430

Met Tyr Ala Ala Tyr Thr Leu Ile Gly Thr Ile Pro Ser Glu Ser Val
 435 440 445

Arg Tyr Thr Arg Arg Met Glu Arg Phe Gly Gly Tyr Asn Val Pro Thr
 450 455 460

Ile Trp Leu Glu Gly Val Val Trp Gly Gly Thr Asn Thr Trp Asn Glu
 465 470 475 480

Cys Tyr Tyr

<210> 69
 <211> 775
 <212> PRT
 <213> Varicella zoster

<400> 69

Met Glu Phe Lys Arg Ile Phe Asn Thr Val His Asp Ile Ile Asn Arg
 1 5 10 15

Leu Cys Gln His Gly Tyr Lys Glu Tyr Ile Ile Pro Pro Glu Ser Thr
 20 25 30

Thr Pro Val Glu Leu Met Glu Tyr Ile Ser Thr Ile Val Ser Lys Leu
 35 40 45

Lys Ala Val Thr Arg Gln Asp Glu Arg Val Tyr Arg Cys Cys Gly Glu
 50 55 60

Leu Ile His Cys Arg Ile Asn Leu Arg Ser Val Ser Met Glu Thr Trp
 65 70 75 80

Leu Thr Ser Pro Ile Leu Cys Leu Thr Pro Arg Val Arg Gln Ala Ile
 85 90 95

Glu Gly Arg Arg Asp Glu Ile Arg Arg Ala Ile Leu Glu Pro Phe Leu
 100 105 110

Lys Asp Gln Tyr Pro Ala Leu Ala Thr Leu Gly Leu Gln Ser Ala Leu
 115 120 125

Lys Tyr Glu Asp Phe Tyr Leu Thr Lys Leu Glu Glu Gly Lys Leu Glu
 130 135 140

Ser Leu Cys Gln Phe Phe Leu Arg Leu Ala Ala Thr Val Thr Thr Glu
 145 150 155 160

Ile Val Asn Leu Pro Lys Ile Ala Thr Leu Ile Pro Gly Ile Asn Asp
 165 170 175

Gly Tyr Thr Trp Thr Asp Val Cys Arg Val Phe Phe Thr Ala Leu Ala
 180 185 190

Cys Gln Lys Ile Val Pro Ala Thr Pro Val Met Met Phe Leu Gly Arg
 195 200 205

Glu Thr Gly Ala Thr Ala Ser Cys Tyr Leu Met Asp Pro Glu Ser Ile
 210 215 220

Thr Val Gly Arg Ala Val Arg Ala Ile Thr Gly Asp Val Gly Thr Val
 225 230 235 240

Leu Gln Ser Arg Gly Gly Val Gly Ile Ser Leu Gln Ser Leu Asn Leu
 245 250 255

Ile Pro Thr Glu Asn Gln Thr Lys Gly Leu Leu Ala Val Leu Lys Leu
 260 265 270

Leu Asp Cys Met Val Met Ala Ile Asn Ser Asp Cys Glu Arg Pro Thr
 275 280 285

Gly Val Cys Val Tyr Ile Glu Pro Trp His Val Asp Leu Gln Thr Val
 290 295 300

Leu Ala Thr Arg Gly Met Leu Val Arg Asp Glu Ile Phe Arg Cys Asp
 305 310 315 320

Asn Ile Phe Cys Cys Leu Trp Thr Pro Asp Leu Phe Phe Glu Arg Tyr
 325 330 335

Leu Ser Tyr Leu Lys Gly Ala Ser Asn Val Gln Trp Thr Leu Phe Asp
 340 345 350

Asn Arg Ala Asp Ile Leu Arg Thr Leu His Gly Glu Ala Phe Thr Ser
 355 360 365

Thr Tyr Leu Arg Leu Glu Arg Glu Gly Leu Gly Val Ser Ser Val Pro
 370 375 380

Ile Gln Asp Ile Ala Phe Thr Ile Ile Arg Ser Ala Ala Val Thr Gly
 385 390 395 400

Ser Pro Phe Leu Met Phe Lys Asp Ala Cys Asn Arg Asn Tyr His Met
 405 410 415

Asn Thr Gln Gly Asn Ala Ile Thr Gly Ser Asn Leu Cys Thr Glu Ile
420 425 430

Val Gln Lys Ala Asp Ala His Gln His Gly Val Cys Asn Leu Ala Ser
435 440 445

Ile Asn Leu Thr Thr Cys Leu Ser Lys Gly Pro Val Ser Phe Asn Leu
450 455 460

Asn Asp Leu Gln Leu Thr Ala Arg Thr Thr Val Ile Phe Leu Asn Gly
465 470 475 480

Val Leu Ala Ala Gly Asn Phe Pro Cys Lys Lys Ser Cys Lys Gly Val
485 490 495

Lys Asn Asn Arg Ser Leu Gly Ile Gly Ile Gln Gly Leu His Thr Thr
500 505 510

Cys Leu Arg Leu Gly Phe Asp Leu Thr Ser Gln Pro Ala Arg Arg Leu
515 520 525

Asn Val Gln Ile Ala Glu Leu Met Leu Tyr Glu Thr Met Lys Thr Ser
530 535 540

Met Glu Met Cys Lys Ile Gly Gly Leu Ala Pro Phe Lys Gly Phe Thr
545 550 555 560

Glu Ser Lys Tyr Ala Lys Gly Trp Leu His Gln Asp Gly Phe Ser Thr
565 570 575

Ile Ser Tyr Leu Asp Leu Pro Trp Cys Thr Leu Arg Asp Asp Ile Cys
580 585 590

Ala Tyr Gly Leu Tyr Asn Ser Gln Phe Leu Ala Leu Met Pro Thr Val
595 600 605

Ser Ser Ala Gln Val Thr Glu Cys Ser Glu Gly Phe Ser Pro Ile Tyr
610 615 620

Asn Asn Met Phe Ser Lys Val Thr Thr Ser Gly Glu Leu Leu Arg Pro
625 630 635 640

Asn Leu Asp Leu Met Asp Glu Leu Arg Asp Met Tyr Ser Cys Glu Glu
645 650 655

Lys Arg Leu Glu Val Ile Asn Ile Leu Glu Lys Asn Gln Trp Ser Val
660 665 670

Ile Arg Ser Phe Gly Cys Leu Ser Asn Ser His Pro Leu Leu Lys Tyr
675 680 685

Lys Thr Ala Phe Glu Tyr Glu Gln Glu Asp Leu Val Asp Met Cys Ala
690 695 700

Glu Arg Ala Pro Phe Ile Asp Gln Ser Gln Ser Met Thr Leu Phe Ile
705 710 715 720

Glu Glu Arg Pro Asp Gly Thr Ile Pro Ala Ser Lys Ile Met Asn Leu
725 730 735

Leu Ile Arg Ala Tyr Lys Ala Gly Leu Lys Thr Gly Met Tyr Tyr Cys
740 745 750

Lys Ile Arg Lys Ala Thr Asn Ser Gly Leu Phe Ala Gly Gly Glu Leu
755 760 765

Thr Cys Thr Ser Cys Ala Leu
770 775

<210> 70
<211> 306
<212> PRT
<213> Varicella zoster

<400> 70

Met Asp Gln Lys Asp Cys Ser His Phe Phe Tyr Arg Pro Glu Cys Pro
1 5 10 15

Asp Ile Asn Asn Leu Arg Ala Leu Ser Ile Ser Asn Arg Trp Leu Glu
20 25 30

Ser Asp Phe Ile Ile Glu Asp Asp Tyr Gln Tyr Leu Asp Cys Leu Thr
35 40 45

Glu Asp Glu Leu Ile Phe Tyr Arg Phe Ile Phe Thr Phe Leu Ser Ala
50 55 60

Ala Asp Asp Leu Val Asn Val Asn Leu Gly Ser Leu Thr Gln Leu Phe
65 70 75 80

Ser Gln Lys Asp Ile His His Tyr Tyr Ile Glu Gln Glu Cys Ile Glu
85 90 95

Val Val His Ala Arg Val Tyr Ser Gln Ile Gln Leu Met Leu Phe Arg
100 105 110

Gly Asp Glu Ser Leu Arg Val Gln Tyr Val Asn Val Thr Ile Asn Asn
115 120 125

Pro Ser Ile Gln Gln Lys Val Gln Trp Leu Glu Glu Lys Val Arg Asp
130 135 140

Asn Pro Ser Val Ala Glu Lys Tyr Ile Leu Met Ile Leu Ile Glu Gly
145 150 155 160

Ile Phe Phe Val Ser Ser Phe Ala Ala Ile Ala Tyr Leu Arg Asn Asn
165 170 175

Gly Leu Phe Val Val Thr Cys Gln Phe Asn Asp Leu Ile Ser Arg Asp
180 185 190

Glu Ala Ile His Thr Ser Ala Ser Cys Cys Ile Tyr Asn Asn Tyr Val
195 200 205

Pro Glu Lys Pro Ala Ile Thr Arg Ile His Gln Leu Phe Ser Glu Ala
210 215 220

Val Glu Ile Glu Cys Ala Phe Leu Lys Ser His Ala Pro Lys Thr Arg
225 230 235 240

Leu Val Asn Val Asp Ala Ile Thr Gln Tyr Val Lys Phe Ser Ala Asp
245 250 255

Arg Leu Leu Ser Ala Ile Asn Val Pro Lys Leu Phe Asn Thr Pro Pro
260 265 270

Pro Asp Ser Asp Phe Pro Leu Ala Phe Met Ile Ala Asp Lys Asn Thr
275 280 285

Asn Phe Phe Glu Arg His Ser Thr Ser Tyr Ala Gly Thr Val Ile Asn
290 295 300

Asp Leu
305

<210> 71
<211> 408
<212> PRT
<213> Varicella zoster

<400> 71

Met Asp Leu Arg Ser Arg Thr Asp Asp Ala Leu Asp Met Glu Leu His
1 5 10 15

Ala Gly Phe Asp Ala Pro Glu Ile Ala Arg Ala Val Leu Thr Glu Lys
20 25 30

Thr Leu Thr Gly Leu Ile Ser Ser Ile Ser Pro Leu Val Asn Arg Leu
35 40 45

Arg Asp Ser Ile Leu Ile Phe Ser Asp Glu Gly Leu Ile Ile His Cys
50 55 60

Ser Leu Glu Thr Glu Gln Leu Tyr Ile Pro Ile Pro Ala Asn Met Phe
65 70 75 80

Asp Gln Tyr Asn Trp Thr Gly Pro Arg Met Val Val Leu Ala Ala Thr
85 90 95

Glu Gly Arg Ser Ser Leu Ile Asp Ala Phe Arg His Thr Lys Asp Pro
100 105 110

Ser Thr Pro Thr Arg Leu Tyr Phe Lys Phe Thr Gly Gln Pro Pro Glu
115 120 125

Arg Ser Ile Ile Gln Thr Met Val Trp Gln Arg Pro Gly Asp Cys Gly
130 135 140

Pro Asp Asp Gln Val Gln Cys Tyr Lys Gln Val Val Lys Arg Glu Leu
145 150 155 160

Ala Cys Tyr Thr Met Met Phe Pro Asn Leu Thr Pro Asp Ile Ser Ile
165 170 175

Cys Leu Lys Arg Asp Gln Phe Thr Arg Leu Gln Arg Leu Leu Lys Thr
180 185 190

Phe Gly Phe Thr Thr Cys Phe Ile Leu Thr Ala Thr Asp Met Tyr Ile
195 200 205

Gln Thr Ala Gly Gly Gly Phe Ile Ser Phe Asn Val Ser Leu Asp Ile
403

210

215

220

Asn Gly Ser Lys Pro Thr Pro Tyr Asn Leu Ile Arg Ser Ile Thr Asn
 225 230 235 240

Ser Lys Arg Ile Leu Asn Asn Val Val Tyr Gly Ser Gly Ser Met Arg
 245 250 255

Glu Phe Gly Val Leu Leu Glu Thr His Ser Gly Phe Arg Ser Ala Val
 260 265 270

Gln Asn Leu Lys Leu Thr Arg Asp Glu Thr Cys Tyr Ile Asn Phe Tyr
 275 280 285

Leu Ala Leu Thr Asn Ser Pro Met Val Gly Leu Tyr Ile Gln Arg Ser
 290 295 300

Ala Pro Val His Ser Phe Phe Tyr Ala Thr Phe Leu Ser Pro Lys Asp
 305 310 315 320

Leu Lys Glu Lys Leu Thr Ser Met Gln Leu Phe Ala Asn Met Glu Ser
 325 330 335

Val Lys Asp Glu Pro Pro Leu Lys Lys Arg Arg Asn Leu Leu Thr Lys
 340 345 350

Arg Asn Glu Lys Asn Thr Gly Asn Lys Met Gly Gly Lys Leu Pro Glu
 355 360 365

Thr Thr Trp Gln Glu Gly Ile Gly Ile Arg Glu Tyr Cys Val Ala Pro
 370 375 380

Pro Val Asp Pro Ala Gly Thr Leu Asp Tyr Ser Glu Leu Ser Arg Glu
 385 390 395 400

Ser Asp Val Ile Cys Thr Val Lys
 405

<210> 72

<211> 406

<212> PRT

<213> Varicella zoster

<400> 72

Met Ala Val Asn Gly Glu Arg Ala Val His Asp Glu Asn Leu Gly Val
 1 5 10 15

Leu Asp Arg Glu Leu Ile Arg Ala Gln Ser Ile Gln Gly Cys Val Gly
20 25 30

Asn Pro Gln Glu Cys Asn Ser Cys Ala Ile Thr Ser Ala Ser Arg Leu
35 40 45

Phe Leu Val Gly Leu Gln Ala Ser Val Ile Thr Ser Gly Leu Ile Leu
50 55 60

Gln Tyr His Val Cys Glu Ala Ala Val Asn Ala Thr Ile Met Gly Leu
65 70 75 80

Ile Val Val Ser Gly Leu Trp Pro Thr Ser Val Lys Phe Leu Arg Thr
85 90 95

Leu Ala Lys Leu Gly Arg Cys Leu Gln Thr Val Val Val Leu Gly Phe
100 105 110

Ala Val Leu Trp Ala Val Gly Cys Pro Ile Ser Arg Asp Leu Pro Phe
115 120 125

Val Glu Leu Leu Gly Ile Ser Ile Ser Ala Ile Thr Gly Thr Val Ala
130 135 140

Ala Val His Ile His Tyr Tyr Asn Phe Val Thr Thr Phe Asn Gly Pro
145 150 155 160

His Ile Tyr Phe Tyr Val Met Met Leu Gly Thr Gly Leu Gly Gly Leu
165 170 175

Leu Thr Val Ile Leu Tyr Met Tyr Val Ser Lys Tyr Glu Val Leu Ile
180 185 190

Gly Leu Cys Ile Ser Ile Val Thr Leu Val Ser Ile Val Asp Ala Ala
195 200 205

Thr Asp Leu Gln Asp Thr Cys Ile Tyr Arg Lys Asn Arg His Lys Gln
210 215 220

Leu Asn Thr Tyr Thr Asp Leu Gly Phe Ala Val Val Tyr Thr Gln Asn
225 230 235 240

Asp Arg Gly Arg Val Cys Asp His Arg Glu Ser Ser Arg Thr Leu Lys
245 250 255

Arg Val Phe Lys Gly Ile Arg Ile Met Ser Val Ile Pro Pro Val Leu
260 265 270

Tyr Ile Val Thr Pro Leu Met Trp Ala Ile Ser His Ile Ile Lys Leu
275 280 285

Asn His Phe Ile Lys Leu Thr Gln Val Thr Leu Ala Val Ser Ile Gly
290 295 300

Gly His Ile Ile Ala Phe Gly Leu Gln Gly Phe Ala Val Leu Tyr Gln
305 310 315 320

Glu Lys Lys Asn Leu Trp Val Ile Val Leu Tyr Thr Thr Thr Ser Val
325 330 335

Thr Gly Ile Ala Val Thr Phe Ala Gly Ile Ser Trp Gly Ala Ile Ile
340 345 350

Ile Leu Thr Ser Thr Val Ala Ala Gly Leu Thr Cys Ile Gln Met Met
355 360 365

Arg Leu Ser Val Lys Pro Ile Asp Cys Phe Met Ala Ser His Ile Thr
370 375 380

Lys Val Tyr His Val Cys Val Tyr Ile Ile Ile Asn Leu Cys Tyr Leu
385 390 395 400

Cys Gly Thr Tyr Val Ser
405

<210> 73
<211> 560
<212> PRT
<213> Varicella zoster

<400> 73

Met Lys Arg Ile Gln Ile Asn Leu Ile Leu Thr Ile Ala Cys Ile Gln
1 5 10 15

Leu Ser Thr Glu Ser Gln Pro Thr Pro Val Ser Ile Thr Glu Leu Tyr
20 25 30

Thr Ser Ala Ala Thr Arg Lys Pro Asp Pro Ala Val Ala Pro Thr Ser
35 40 45

Ala Ala Ser Arg Lys Pro Asp Pro Ala Val Ala Pro Thr Ser Ala Ala
 50 55 60

Ser Arg Lys Pro Asp Pro Ala Val Ala Pro Thr Ser Ala Ala Ser Arg
 65 70 75 80

Lys Pro Asp Pro Ala Val Ala Pro Thr Ser Ala Ala Thr Arg Lys Pro
 85 90 95

Asp Pro Ala Val Ala Pro Thr Ser Ala Ala Ser Arg Lys Pro Asp Pro
 100 105 110

Ala Val Ala Pro Thr Ser Ala Ala Thr Arg Lys Pro Asp Pro Ala Val
 115 120 125

Ala Pro Thr Ser Ala Ala Ser Arg Lys Pro Asp Pro Ala Ala Asn Thr
 130 135 140

Gln His Ser Gln Pro Pro Phe Leu Tyr Glu Asn Ile Gln Cys Val His
 145 150 155 160

Gly Gly Ile Gln Ser Ile Pro Tyr Phe His Thr Phe Ile Met Pro Cys
 165 170 175

Tyr Met Arg Leu Thr Thr Gly Gln Gln Ala Ala Phe Lys Gln Gln Gln
 180 185 190

Lys Thr Tyr Glu Gln Tyr Ser Leu Asp Pro Glu Gly Ser Asn Ile Thr
 195 200 205

Arg Trp Lys Ser Leu Ile Arg Pro Asp Leu His Ile Glu Val Trp Phe
 210 215 220

Thr Arg His Leu Ile Asp Pro His Arg Gln Leu Gly Asn Ala Leu Ile
 225 230 235 240

Arg Met Pro Asp Leu Pro Val Met Leu Tyr Ser Asn Ser Ala Asp Leu
 245 250 255

Asn Leu Ile Asn Asn Pro Glu Ile Phe Thr His Ala Lys Glu Asn Tyr
 260 265 270

Val Ile Pro Asp Val Lys Thr Thr Ser Asp Phe Ser Val Thr Ile Leu
 275 280 285

Ser Met Asp Ala Thr Thr Glu Gly Thr Tyr Ile Trp Arg Val Val Asn
 290 295 300

Thr Lys Thr Lys Asn Val Ile Ser Glu His Ser Ile Thr Val Thr Thr
 305 310 315 320

Tyr Tyr Arg Pro Asn Ile Thr Val Val Gly Asp Pro Val Leu Thr Gly
 325 330 335

Gln Thr Tyr Ala Ala Tyr Cys Asn Val Ser Lys Tyr Tyr Pro Pro His
 340 345 350

Ser Val Arg Val Arg Trp Thr Ser Arg Phe Gly Asn Ile Gly Lys Asn
 355 360 365

Phe Ile Thr Asp Ala Ile Gln Glu Tyr Ala Asn Gly Leu Phe Ser Tyr
 370 375 380

Val Ser Ala Val Arg Ile Pro Gln Gln Lys Gln Met Asp Tyr Pro Pro
 385 390 395 400

Pro Ala Ile Gln Cys Asn Val Leu Trp Ile Arg Asp Gly Val Ser Asn
 405 410 415

Met Lys Tyr Ser Ala Val Val Thr Pro Asp Val Tyr Pro Phe Pro Asn
 420 425 430

Val Ser Ile Gly Ile Ile Asp Gly His Ile Val Cys Thr Ala Lys Cys
 435 440 445

Val Pro Arg Gly Val Val His Phe Val Trp Trp Val Asn Asp Ser Pro
 450 455 460

Ile Asn His Glu Asn Ser Glu Ile Thr Gly Val Cys Asp Gln Asn Lys
 465 470 475 480

Arg Phe Val Asn Met Gln Ser Ser Cys Pro Thr Ser Glu Leu Asp Gly
 485 490 495

Pro Ile Thr Tyr Ser Cys His Leu Asp Gly Tyr Pro Lys Lys Phe Pro
 500 505 510

Pro Phe Ser Ala Val Tyr Thr Tyr Asp Ala Ser Thr Tyr Ala Thr Thr
 515 520 525

Phe Ser Val Val Ala Val Ile Ile Gly Val Ile Ser Ile Leu Gly Thr
 530 535 540

Leu Gly Leu Ile Ala Val Ile Ala Thr Leu Cys Ile Arg Cys Cys Ser
 545 550 555 560

<210> 74
 <211> 396
 <212> PRT
 <213> Varicella zoster

<400> 74

Met Asn Glu Ala Val Ile Asp Pro Ile Leu Glu Thr Ala Val Asn Thr
 1 5 10 15

Gly Asp Met Phe Cys Ser Gln Thr Ile Pro Asn Arg Cys Leu Lys Asp
 20 25 30

Thr Ile Leu Ile Glu Val Gln Pro Glu Cys Ala Asp Thr Leu Gln Cys
 35 40 45

Val Leu Asp Asp Lys Val Ser Arg His Gln Pro Leu Leu Leu Arg Asn
 50 55 60

His Lys Lys Leu Glu Leu Pro Ser Glu Lys Ser Val Thr Arg Gly Gly
 65 70 75 80

Phe Tyr Met Gln Gln Leu Glu Leu Leu Val Lys Ser Ala Pro Pro Asn
 85 90 95

Glu Tyr Ala Leu Leu Leu Ile Gln Cys Lys Asp Thr Ala Leu Ala Asp
 100 105 110

Glu Asp Asn Phe Phe Val Ala Asn Gly Val Ile Asp Ala Gly Tyr Arg
 115 120 125

Gly Val Ile Ser Ala Leu Leu Tyr Tyr Arg Pro Gly Val Thr Val Ile
 130 135 140

Leu Pro Gly His Leu Thr Ile Tyr Leu Phe Pro Val Lys Leu Arg Gln
 145 150 155 160

Ser Arg Leu Leu Pro Lys Asn Val Leu Lys His Leu Asp Pro Ile Phe
 165 170 175

Lys Ser Ile Gln Val Gln Pro Leu Ser Asn Ser Pro Ser Asn Tyr Glu
180 185 190

Lys Pro Val Ile Pro Glu Phe Ala Asp Ile Ser Thr Val Gln Gln Gly
195 200 205

Gln Pro Leu His Arg Asp Ser Ala Glu Tyr His Ile Asp Val Pro Leu
210 215 220

Thr Tyr Lys His Ile Ile Asn Pro Lys Arg Gln Glu Asp Ala Gly Tyr
225 230 235 240

Asp Ile Cys Val Pro Tyr Asn Leu Tyr Leu Lys Arg Asn Glu Phe Ile
245 250 255

Lys Ile Val Leu Pro Ile Ile Arg Asp Trp Asp Leu Gln His Pro Ser
260 265 270

Ile Asn Ala Tyr Ile Phe Gly Arg Ser Ser Lys Ser Arg Ser Gly Ile
275 280 285

Ile Val Cys Pro Thr Ala Trp Pro Ala Gly Glu His Cys Lys Phe Tyr
290 295 300

Val Tyr Asn Leu Thr Gly Asp Asp Ile Arg Ile Lys Thr Gly Asp Arg
305 310 315 320

Leu Ala Gln Val Leu Leu Ile Asp His Asn Thr Gln Ile His Leu Lys
325 330 335

His Asn Val Leu Ser Asn Ile Ala Phe Pro Tyr Ala Ile Arg Gly Lys
340 345 350

Cys Gly Ile Pro Gly Val Gln Trp Tyr Phe Thr Lys Thr Leu Asp Leu
355 360 365

Ile Ala Thr Pro Ser Glu Arg Gly Thr Arg Gly Phe Gly Ser Thr Asp
370 375 380

Lys Glu Thr Asn Asp Val Asp Phe Leu Leu Lys His
385 390 395

<210> 75

<211> 1083

<212> PRT

<213> Varicella zoster

<400> 75

Met Asp Lys Ser Ser Lys Pro Thr Ile Arg Leu Leu Phe Ala Thr Lys
1 5 10 15

Gly Cys Ala Ile Ser His Ser Leu Leu Leu Thr Gly Gln Ile Ser
20 25 30

Thr Glu Pro Leu Tyr Val Val Ser Tyr Thr Trp Thr Pro Asp Leu Asp
35 40 45

Asp Val Phe Val Lys Asn Gly Arg Glu Glu Ile Thr Gln Val Ile Pro
50 55 60

Thr Lys Arg Pro Arg Glu Val Thr Glu Asn Asp Glu Glu Asn Gln Ile
65 70 75 80

Met His Leu Phe Cys Ser Arg Asp Val Asn Val Ile Phe Tyr Leu Ile
85 90 95

Gly Gly Phe Ser Thr Gly Asp Val Arg Ser Arg Val Trp Pro Ile Phe
100 105 110

Phe Cys Cys Phe Lys Thr Gln Thr Asp Phe Lys Ala Leu Tyr Lys Ala
115 120 125

Leu Trp Tyr Gly Ala Pro Leu Asn Pro His Ile Ile Ser Asp Thr Leu
130 135 140

Cys Ile Ser Glu Thr Phe Asp Ile His Ser Glu Val Ile Gln Thr Leu
145 150 155 160

Met Val Thr Thr His His Leu Asn Arg Lys Gly Leu Ser Asp Asn Gly
165 170 175

Leu Cys Ile Thr Glu Ala Thr Leu Cys Lys Leu Val Lys Lys Ser Val
180 185 190

Gly Arg Gln Glu Leu Thr Ser Leu Tyr Ala His Tyr Glu Arg Gln Val
195 200 205

Leu Ala Ala Tyr Arg Arg Leu Tyr Trp Gly Tyr Gly Cys Ser Pro Phe
210 215 220

Trp Tyr Ile Val Arg Phe Gly Pro Ser Glu Lys Thr Leu Val Leu Ala
411

225	230							235					240		
Thr	Arg	Tyr	Tyr	Leu	Leu	Gln	Thr	Asp	Thr	Ser	Tyr	Asn	Thr	Leu	Glu
				245					250					255	
Thr	Pro	Leu	Tyr	Asp	Leu	Gln	Ala	Ile	Lys	Asp	Leu	Phe	Leu	Thr	Tyr
			260					265					270		
Gln	Val	Pro	Ala	Leu	Pro	Asn	Cys	Ser	Gly	Tyr	Asn	Ile	Ser	Asp	Leu
		275					280					285			
Leu	Ser	Phe	Asp	Lys	Leu	Ser	Met	Phe	Cys	Cys	Ser	Ser	Thr	Tyr	Thr
	290					295					300				
Arg	Gly	Leu	Thr	Ala	Lys	Asn	Ala	Leu	Ser	Tyr	Ile	Leu	Gln	Arg	Ile
305					310					315					320
His	Thr	Asp	Thr	Thr	Glu	Ile	His	Ala	Val	Ser	Glu	Tyr	Ile	Thr	Asn
				325					330					335	
Asp	Arg	Lys	Gly	Leu	Lys	Val	Pro	Asp	Arg	Glu	Phe	Val	Asp	Tyr	Ile
			340					345					350		
Tyr	Leu	Ala	His	Phe	Glu	Cys	Phe	Asn	Arg	Lys	Gln	Ile	Ala	Asp	His
		355					360					365			
Leu	Gln	Ala	Val	Thr	Tyr	Ser	Asp	Phe	Val	Asn	Lys	Pro	Val	Leu	Leu
	370					375					380				
Lys	Ser	Ser	Asn	Leu	Gly	Lys	Arg	Ala	Thr	Ala	Asn	Phe	Phe	Asn	His
385					390					395					400
Val	Arg	Ser	Arg	Leu	Asn	Met	Arg	Asp	Tyr	Ile	Lys	Lys	Asn	Val	Ile
				405					410					415	
Cys	Asp	Val	Thr	Glu	Leu	Gly	Pro	Glu	Ile	Gly	His	Lys	Tyr	Thr	Ile
			420					425					430		
Thr	Lys	Thr	Tyr	Thr	Leu	Ser	Leu	Thr	Tyr	Ala	Ala	Lys	Pro	Ser	Lys
		435					440					445			
Phe	Ile	Gly	Val	Cys	Asp	Leu	Ala	Thr	Thr	Leu	Thr	Arg	Arg	Val	Glu
	450					455					460				
Asn	Ile	Glu	Lys	Gln	Phe	Ser	Pro	Tyr	Gly	Trp	Ser	Ser	Thr	Ile	Pro
										412					

465						470						475						480
Ser	Asn	Pro	Pro	Gly	Phe	Asp	Glu	Leu	Ser	Asn	Phe	Glu	Asp	Ser	Gly			
				485					490					495				
Val	Ser	Ala	Glu	Ala	Leu	Arg	Ala	Ala	Asn	Phe	Ala	Asn	Asp	Thr	Pro			
				500					505					510				
Asn	Gln	Ser	Gly	Arg	Thr	Gly	Phe	Asp	Thr	Ser	Pro	Gly	Ile	Thr	Lys			
				515					520					525				
Leu	Leu	Leu	Phe	Phe	Ser	Ala	Ala	Thr	Gly	Ile	Ala	Thr	His	Asp	Val			
				530					535					540				
Ser	Ile	Leu	Ser	Tyr	Lys	Thr	Pro	Leu	Glu	Ala	Leu	Ile	Gly	His	Ser			
				545					550					555				
Glu	Val	Thr	Gly	Pro	Met	Pro	Val	Tyr	Arg	Val	Ala	Leu	Pro	His	Gly			
				565					570					575				
Ala	Gln	Ala	Phe	Ala	Val	Ile	Ala	Asn	Asp	Thr	Trp	Ser	Ser	Ile	Thr			
				580					585					590				
Asn	Arg	Tyr	Thr	Leu	Pro	His	Glu	Ala	Arg	Leu	Ile	Ala	Glu	Asp	Leu			
				595					600					605				
Lys	Gln	Ile	Asn	Pro	Cys	Asn	Phe	Val	Ala	Ala	Ser	Leu	Arg	Asp	Met			
				610					615					620				
Gln	Leu	Thr	Leu	Leu	Leu	Ser	Thr	Ser	Val	Lys	Asn	Val	Ser	Lys	Ile			
				625					630					635				
Ser	Ser	Asn	Ile	Pro	Lys	Asp	Gln	Leu	Tyr	Ile	Asn	Arg	Asn	Glu	Leu			
				645					650					655				
Phe	Asn	Thr	Asn	Leu	Ile	Ile	Thr	Asn	Leu	Ile	Leu	Asp	Val	Asp	Phe			
				660					665					670				
His	Ile	Arg	Lys	Pro	Ile	Pro	Leu	Gly	Ile	Leu	His	Ala	Gly	Met	Arg			
				675					680					685				
Ala	Phe	Arg	His	Gly	Ile	Leu	Thr	Ala	Met	Gln	Leu	Leu	Phe	Pro	Lys			
				690					695					700				
Ala	Val	Val	Asn	Pro	Asn	Lys	Asp	Pro	Cys	Tyr	Phe	Tyr	Lys	Thr	Ala			
										413								

705						710						715						720
Cys	Pro	Glu	Pro	Thr	Val	Glu	Val	Leu	Asp	Asp	Asp	Asn	Leu	Leu	Asp			
				725					730					735				
Ile	Thr	Ser	His	Ser	Asp	Ile	Asp	Phe	Tyr	Ile	Glu	Asn	Gly	Glu	Leu			
				740					745					750				
Tyr	Thr	Cys	Val	Glu	Glu	Asn	Tyr	Thr	Glu	Asp	Val	Trp	Phe	Phe	Asp			
				755					760					765				
Thr	Gln	Thr	Thr	Ser	Glu	Val	His	Thr	His	Ala	Asp	Val	Ser	Asn	Asn			
				770					775					780				
Glu	Asn	Leu	His	Glu	Thr	Leu	Pro	Cys	Asn	Cys	Lys	Glu	Lys	Ile	Gly			
				785					790					795				
Phe	Arg	Val	Cys	Val	Pro	Ile	Pro	Asn	Pro	Tyr	Ala	Leu	Val	Gly	Ser			
				805					810					815				
Ser	Thr	Leu	Lys	Gly	Phe	Ala	Gln	Ile	Leu	Gln	Gln	Ala	Val	Leu	Leu			
				820					825					830				
Glu	Arg	Glu	Phe	Val	Glu	Tyr	Ile	Gly	Pro	Tyr	Leu	Arg	Asp	Phe	Ser			
				835					840					845				
Phe	Ile	Asp	Thr	Gly	Val	Tyr	Ser	His	Gly	His	Ser	Leu	Arg	Leu	Pro			
				850					855					860				
Phe	Phe	Ser	Lys	Val	Thr	Thr	Thr	Gly	Thr	Ala	Val	Gly	Gln	Leu	Leu			
				865					870					875				
Pro	Phe	Tyr	Val	Val	Pro	Glu	Gln	Cys	Ile	Asp	Ile	Leu	Ala	Phe	Val			
				885					890					895				
Thr	Ser	His	Arg	Asn	Pro	Ala	Asn	Phe	His	Phe	His	Ser	Arg	Pro	Gln			
				900					905					910				
Ser	Asn	Val	Pro	Val	Gln	Phe	Ile	Leu	His	Asn	Leu	Gly	Gly	Glu	Tyr			
				915					920					925				
Ala	Glu	Phe	Phe	Glu	Arg	Lys	Val	Ala	Arg	Asn	Lys	Gln	Ile	Phe	Ser			
				930					935					940				
Ser	Pro	Gln	Ile	Ser	Leu	Thr	Lys	Ala	Leu	Lys	Glu	Arg	Gly	Val	Thr			
414																		

945		950		955		960									
Cys	Leu	Asp	Ala	Phe	Thr	Leu	Glu	Ala	Phe	Val	Asp	Ser	Thr	Ile	Leu
				965					970					975	
Glu	Ser	Ile	Val	Glu	His	Ile	Ala	Val	His	Phe	Pro	Gly	Arg	Asp	Arg
			980					985					990		
Glu	Tyr	Thr	Leu	Thr	Ser	Ser	Lys	Cys	Ile	Ala	Ile	Lys	Arg	Asp	Trp
			995				1000					1005			
Val	Leu	Phe	Gln	Leu	Ile	Cys	Gly	Thr	Lys	Gly	Phe	Thr	Cys	Leu	
	1010					1015					1020				
Arg	Tyr	Pro	His	Arg	Gly	Gly	Arg	Thr	Ala	Pro	Arg	Thr	Phe	Val	
	1025					1030					1035				
Ser	Leu	Arg	Val	Asp	His	His	Asn	Arg	Leu	Cys	Ile	Ser	Leu	Ala	
	1040					1045					1050				
Gln	Gln	Cys	Phe	Ala	Thr	Lys	Cys	Asp	Ser	Asn	Arg	Met	His	Thr	
	1055					1060					1065				
Ile	Phe	Thr	Leu	Glu	Val	Pro	Asn	Tyr	Pro	Asn	Leu	Thr	Ser	Ser	
	1070					1075					1080				
<210>	76														
<211>	340														
<212>	PRT														
<213>	Varicella zoster														
<400>	76														
Met	Gln	Ala	Leu	Gly	Ile	Lys	Thr	Glu	His	Phe	Ile	Ile	Met	Cys	Leu
1				5					10					15	
Leu	Ser	Gly	His	Ala	Val	Phe	Thr	Leu	Trp	Tyr	Thr	Ala	Arg	Val	Lys
			20					25					30		
Phe	Glu	His	Glu	Cys	Val	Tyr	Ala	Thr	Thr	Val	Ile	Asn	Gly	Gly	Pro
		35					40					45			
Val	Val	Trp	Gly	Ser	Tyr	Asn	Asn	Ser	Leu	Ile	Tyr	Val	Thr	Phe	Val
	50					55					60				
Asn	His	Ser	Thr	Phe	Leu	Asp	Gly	Leu	Ser	Gly	Tyr	Asp	Tyr	Ser	Cys
65					70					75					80
										415					

Arg Glu Asn Leu Leu Ser Gly Asp Thr Met Val Lys Thr Ala Ile Ser
85 90 95

Thr Pro Leu His Asp Lys Ile Arg Ile Val Leu Gly Thr Arg Asn Cys
100 105 110

His Ala Tyr Phe Trp Cys Val Gln Leu Lys Met Ile Phe Phe Ala Trp
115 120 125

Phe Val Tyr Gly Met Tyr Leu Gln Phe Arg Arg Ile Arg Arg Met Phe
130 135 140

Gly Pro Phe Arg Ser Ser Cys Glu Leu Ile Ser Pro Thr Ser Tyr Ser
145 150 155 160

Leu Asn Tyr Val Thr Arg Val Ile Ser Asn Ile Leu Leu Gly Tyr Pro
165 170 175

Tyr Thr Lys Leu Ala Arg Leu Leu Cys Asp Val Ser Met Arg Arg Asp
180 185 190

Gly Met Ser Lys Val Phe Asn Ala Asp Pro Ile Ser Phe Leu Tyr Met
195 200 205

His Lys Gly Val Thr Leu Leu Met Leu Leu Glu Val Ile Ala His Ile
210 215 220

Ser Ser Gly Cys Ile Val Leu Leu Thr Leu Gly Val Ala Tyr Thr Pro
225 230 235 240

Cys Ala Leu Leu Tyr Pro Thr Tyr Ile Arg Ile Leu Ala Trp Val Val
245 250 255

Val Cys Thr Leu Ala Ile Val Glu Leu Ile Ser Tyr Val Arg Pro Lys
260 265 270

Pro Thr Lys Asp Asn His Leu Asn His Ile Asn Thr Gly Gly Ile Arg
275 280 285

Gly Ile Cys Thr Thr Cys Cys Ala Thr Val Met Ser Gly Leu Ala Ile
290 295 300

Lys Cys Phe Tyr Ile Val Ile Phe Ala Ile Ala Val Val Ile Phe Met
305 310 315 320

His Tyr Glu Gln Arg Val Gln Val Ser Leu Phe Gly Glu Ser Glu Asn
325 330 335

Ser Gln Lys His
340

<210> 77
<211> 452
<212> PRT
<213> Varicella zoster

<400> 77

Met Ala Ser Ala Ser Ile Pro Thr Asp Pro Asp Val Ser Thr Ile Cys
1 5 10 15

Glu Asp Phe Met Asn Leu Leu Pro Asp Glu Pro Ser Asp Asp Phe Ala
20 25 30

Leu Glu Val Thr Asp Trp Ala Asn Asp Glu Ala Ile Gly Ser Thr Pro
35 40 45

Gly Glu Asp Ser Thr Thr Ser Arg Thr Val Tyr Val Glu Arg Thr Ala
50 55 60

Asp Thr Ala Tyr Asn Pro Arg Tyr Ser Lys Arg Arg His Gly Arg Arg
65 70 75 80

Glu Ser Tyr His His Asn Arg Pro Lys Thr Leu Val Val Val Leu Pro
85 90 95

Asp Ser Asn His His Gly Gly Arg Asp Val Glu Thr Gly Tyr Ala Arg
100 105 110

Ile Glu Arg Gly His Arg Arg Ser Ser Arg Ser Tyr Asn Thr Gln Ser
115 120 125

Ser Arg Lys His Arg Asp Arg Ser Leu Ser Asn Arg Arg Arg Arg Pro
130 135 140

Thr Thr Pro Pro Ala Met Thr Thr Gly Glu Arg Asn Asp Gln Thr His
145 150 155 160

Asp Glu Ser Tyr Arg Leu Arg Phe Ser Lys Arg Asp Ala Arg Arg Glu
165 170 175

Arg	Ile	Arg	Lys	Glu	Tyr	Asp	Ile	Pro	Val	Asp	Arg	Ile	Thr	Gly	Arg	180	185	190	
Ala	Ile	Glu	Val	Val	Ser	Thr	Ala	Gly	Ala	Ser	Val	Thr	Ile	Asp	Ser	195	200	205	
Val	Arg	His	Leu	Asp	Glu	Thr	Ile	Glu	Lys	Leu	Val	Val	Arg	Tyr	Ala	210	215	220	
Thr	Ile	Gln	Glu	Gly	Asp	Ser	Trp	Ala	Ser	Gly	Gly	Cys	Phe	Pro	Gly	225	230	235	240
Ile	Lys	Gln	Asn	Thr	Ser	Trp	Pro	Glu	Leu	Met	Leu	Tyr	Gly	His	Glu	245	250	255	
Leu	Tyr	Arg	Thr	Phe	Glu	Ser	Tyr	Lys	Met	Asp	Ser	Arg	Ile	Ala	Arg	260	265	270	
Ala	Leu	Arg	Glu	Arg	Val	Ile	Arg	Gly	Glu	Ser	Leu	Ile	Glu	Ala	Leu	275	280	285	
Glu	Ser	Ala	Asp	Glu	Leu	Leu	Thr	Trp	Ile	Lys	Met	Leu	Ala	Ala	Lys	290	295	300	
Asn	Leu	Pro	Ile	Tyr	Thr	Asn	Asn	Pro	Ile	Val	Ala	Thr	Ser	Lys	Ser	305	310	315	320
Leu	Leu	Glu	Asn	Leu	Lys	Leu	Lys	Leu	Gly	Pro	Phe	Val	Arg	Cys	Leu	325	330	335	
Leu	Leu	Asn	Arg	Asp	Asn	Asp	Leu	Gly	Ser	Arg	Thr	Leu	Pro	Glu	Leu	340	345	350	
Leu	Arg	Gln	Gln	Arg	Phe	Ser	Asp	Ile	Thr	Cys	Ile	Thr	Thr	Tyr	Met	355	360	365	
Phe	Val	Met	Ile	Ala	Arg	Ile	Ala	Asn	Ile	Val	Val	Arg	Gly	Ser	Lys	370	375	380	
Phe	Val	Glu	Tyr	Asp	Asp	Ile	Ser	Cys	Asn	Val	Gln	Val	Leu	Gln	Glu	385	390	395	400
Tyr	Thr	Pro	Gly	Ser	Cys	Leu	Ala	Gly	Val	Leu	Glu	Ala	Leu	Ile	Thr	405	410	415	

His Gln Arg Glu Cys Gly Arg Val Glu Cys Thr Leu Ser Thr Trp Ala
420 425 430

Gly His Leu Ser Asp Ala Arg Pro Tyr Gly Lys Tyr Phe Lys Cys Ser
435 440 445

Thr Phe Asn Cys
450

<210> 78
<211> 179
<212> PRT
<213> Varicella zoster

<400> 78

Met Asp Thr Thr Gly Ala Ser Glu Ser Ser Gln Pro Ile Arg Val Asn
1 5 10 15

Leu Lys Pro Asp Pro Leu Ala Ser Phe Thr Gln Val Ile Pro Pro Leu
20 25 30

Ala Leu Glu Thr Thr Trp Thr Cys Pro Ala Asn Ser His Ala Pro Thr
35 40 45

Pro Ser Pro Leu Tyr Gly Val Lys Arg Leu Cys Ala Leu Arg Ala Thr
50 55 60

Cys Gly Arg Ala Asp Asp Leu His Ala Phe Leu Ile Gly Leu Gly Arg
65 70 75 80

Arg Asp Lys Pro Ser Glu Ser Pro Met Tyr Val Asp Leu Gln Pro Phe
85 90 95

Cys Ser Leu Leu Asn Ser Gln Arg Leu Leu Pro Glu Met Ala Asn Tyr
100 105 110

Asn Thr Leu Cys Asp Ala Pro Phe Ser Ala Ala Thr Gln Gln Met Met
115 120 125

Leu Glu Ser Gly Gln Leu Gly Val His Leu Ala Ala Ile Gly Tyr His
130 135 140

Cys His Cys Lys Ser Pro Phe Ser Ala Glu Cys Trp Thr Gly Ala Ser
145 150 155 160

Glu Ala Tyr Asp His Val Val Cys Gly Gly Lys Ala Arg Ala Ala Val
165 170 175

Gly Gly Leu

<210> 79
<211> 108
<212> PRT
<213> Varicella zoster

<400> 79

Met Ser Arg Val Ser Glu Tyr Gly Val Pro Glu Gly Val Arg Glu Ser
1 5 10 15

Asp Ser Asp Thr Asp Ser Val Phe Met Tyr Gln His Thr Glu Leu Met
20 25 30

Gln Asn Asn Ala Ser Pro Leu Val Val Gln Thr Arg Pro Pro Ala Val
35 40 45

Leu Ile Pro Leu Val Asp Val Pro Arg Pro Arg Ser Arg Arg Lys Ala
50 55 60

Ser Ala Gln Leu Lys Met Gln Met Asp Arg Leu Cys Asn Val Leu Gly
65 70 75 80

Val Val Leu Gln Met Ala Thr Leu Ala Leu Val Thr Tyr Ile Ala Phe
85 90 95

Val Val His Thr Arg Ala Thr Ser Cys Lys Arg Glu
100 105

<210> 80
<211> 5743
<212> DNA
<213> Varicella zoster

<220>
<221> CDS
<222> (1)..(1056)

<220>
<221> CDS
<222> (4556)..(5740)

<400> 80
atg tca ttg ata atg ttt ggt cgt acg ctt ggt gaa gaa tct gta aga
Met Ser Leu Ile Met Phe Gly Arg Thr Leu Gly Glu Glu Ser Val Arg
420

1	5	10	15	
tat ttt gaa cgt cta aag cgt cgt agg gat gaa cgc ttt ggg acg ttg	96			
Tyr Phe Glu Arg Leu Lys Arg Arg Arg Asp Glu Arg Phe Gly Thr Leu				
20 25 30				
gag tcc cct acc ccg tgt tcc acg cgg caa ggg tct ctg gga aac gca	144			
Glu Ser Pro Thr Pro Cys Ser Thr Arg Gln Gly Ser Leu Gly Asn Ala				
35 40 45				
acc caa atc ccg ttt ctg aat ttt gct ata gat gta acc cga cgt cat	192			
Thr Gln Ile Pro Phe Leu Asn Phe Ala Ile Asp Val Thr Arg Arg His				
50 55 60				
cag gcc gtt att ccc gga att gga acg ctt cac aac tgt tgt gaa tat	240			
Gln Ala Val Ile Pro Gly Ile Gly Thr Leu His Asn Cys Cys Glu Tyr				
65 70 75 80				
att cca ctg ttc tcg gct act gct cga cgg gca atg ttt ggc gcg ttt	288			
Ile Pro Leu Phe Ser Ala Thr Ala Arg Arg Ala Met Phe Gly Ala Phe				
85 90 95				
cta tcg tca aca ggg tac aac tgt acc ccc aat gta gtt ttg aaa cca	336			
Leu Ser Ser Thr Gly Tyr Asn Cys Thr Pro Asn Val Val Leu Lys Pro				
100 105 110				
tgg cga tat tcg gta aat gca aac gta agc cct gaa tta aaa aag gct	384			
Trp Arg Tyr Ser Val Asn Ala Asn Val Ser Pro Glu Leu Lys Lys Ala				
115 120 125				
gtc agt agt gta cag ttt tat gaa tat tca ccg gaa gaa gca gca cct	432			
Val Ser Ser Val Gln Phe Tyr Glu Tyr Ser Pro Glu Glu Ala Ala Pro				
130 135 140				
cat cga aat gcg tat agc ggt gtt atg aac aca ttt cgc gcg ttt tct	480			
His Arg Asn Ala Tyr Ser Gly Val Met Asn Thr Phe Arg Ala Phe Ser				
145 150 155 160				
ctg tcg gat agt ttc tgt cag ttg tct acc ttt aca caa cgg ttt tcg	528			
Leu Ser Asp Ser Phe Cys Gln Leu Ser Thr Phe Thr Gln Arg Phe Ser				
165 170 175				
tac ctt gtg gaa aca tct ttt gag agt att gaa gag tgt gga agt cat	576			
Tyr Leu Val Glu Thr Ser Phe Glu Ser Ile Glu Glu Cys Gly Ser His				
180 185 190				
ggc aaa cgc gca aag gtt gac gtt cca atc tat ggc aga tat aag ggg	624			
Gly Lys Arg Ala Lys Val Asp Val Pro Ile Tyr Gly Arg Tyr Lys Gly				
195 200 205				
acg ttg gaa ctg ttt caa aaa atg atc ctc atg cac acc acg cat ttt	672			
Thr Leu Glu Leu Phe Gln Lys Met Ile Leu Met His Thr Thr His Phe				
210 215 220				
att tca tcg gtg cta ttg ggc gat cat gcc gac aga gtt gac tgc ttt	720			
Ile Ser Ser Val Leu Leu Gly Asp His Ala Asp Arg Val Asp Cys Phe				
225 230 235 240				
ctg cgt aca gtg ttt aac acg cca agt gtt tct gac agt gtt tta gaa	768			
Leu Arg Thr Val Phe Asn Thr Pro Ser Val Ser Asp Ser Val Leu Glu				

245	250	255	
cac ttc aaa caa aaa tca act gtg ttt ttg gta cca cgt aga cat ggg His Phe Lys Gln Lys Ser Thr Val Phe Leu Val Pro Arg Arg His Gly 260 265 270			816
aaa aca tgg ttt ctt gta cca tta ata gct tta gta atg gcc acg ttt Lys Thr Trp Phe Leu Val Pro Leu Ile Ala Leu Val Met Ala Thr Phe 275 280 285			864
aga gga att aaa gtg ggt tat acg gct cat ata cgc aaa gca acg gaa Arg Gly Ile Lys Val Gly Tyr Thr Ala His Ile Arg Lys Ala Thr Glu 290 295 300			912
ccc gtg ttt gag ggt atc aag tct cgc ctg gaa cag tgg ttt ggg gca Pro Val Phe Glu Gly Ile Lys Ser Arg Leu Glu Gln Trp Phe Gly Ala 305 310 315 320			960
aat tac gtg gat cat gta aaa ggc gaa tct att acg ttt tca ttt acc Asn Tyr Val Asp His Val Lys Gly Glu Ser Ile Thr Phe Ser Phe Thr 325 330 335			1008
gac ggg tct tac agc aca gcg gtg ttc gcg tca agt cac aac aca aac Asp Gly Ser Tyr Ser Thr Ala Val Phe Ala Ser Ser His Asn Thr Asn 340 345 350			1056
gtgagtggtt tataaattta acctttaata tattactgta aatggtgaca tatacctttc			1116
cacaacggcg gttgagttaa ggtatactag gtgggtgtag gttccgggtc acccgataat			1176
ctttgtgtct cggggaagca aattcgctga agcagaccac agccgttaat aatagcccgg			1236
cttaatgttt ctccaaacat ataaagctgc caccagatg aatttactgg tacagagaga			1296
ccactggcgt tggttccgc tataacgtcg ccaagatttg cggtaatgcg aggattttta			1356
gtactcgtaa ttcgaatgca ggtggtgaca tctacaaaaa gaacctgcgt ggcgccaatg			1416
tctacctcca cttttaattc ccgctgaccg gcctttctcc acatacacgg agcccaacac			1476
acacaacctt ccgcatgatt tgtgacatgg ggtaacgcat acagtgcccc cacgtgaact			1536
ctatgattac attcatcaca tccgtccgca tggctgagga gtcgatttaa tacagagcca			1596
agtatccgag catgccatcc ggcgggacat agccctatta aattagggtc catagccagt			1656
acataataac gccttcgttc gtctgaccac cacactcccg gagaaataac ttacatgcg			1716
tatggatttt tcggaagccg cgggggttgt aagtagttgc ttaagtgttg cgttggtgta			1776
agatctgcgg ggggtggatc tgctcgagga tccggaatag atgttggaag ggggtacgcg			1836
atcgggttct taaacgttgc tccaaaaaca tgggtctatgt tttcaaccgg ataaattctt			1896
aaagtcgccg tcattgcgta cgagacctcg taattaaaat ttacaattac atgaaaagtc			1956
ttcggaggta agttcatctg acgtggggcg gtgatgtaaa ttgtggctac aacaacggca			2016
atattagtag tatccgtttg aaggggggata aacggagcga tccttaaagt tataaaagca			2076

gttgatcgca ttattttcac ccggggatcg gtcaggatgg acttccataa tcccatatcc	2136
agcgттаатг catcgсagag tctctgaact gcctcggggg ttaatttgсg cgctgcaccc	2196
gtagcggtgt acagcgгaaa tatgcgttgt aattccatga gcagaaaaac agtctagcgg	2256
attgccgccc gggтacttgt gggтттаатг ccacccaccc ggttatttta tattttaaga	2316
gggggtggaa acgggagaaa tgacgтаaaa ttacatatga agagattctg gtgttatgtt	2376
tttatagtga cactaattta tttatggggg ttgggaatag agaagcagaa tctgtctaga	2436
ataggtccga ttaacgatgc aggtagtgt gcctgtaggg tatcgгтаат аcaaaaacat	2496
gccgcaaатс cccccggtaa aactaaaатг gattgтаatt gctggттaaa tcctagacaa	2556
atgtacgcgt aacattgacc gggтааатс ttagaacaaa ttccaататс аcaaatatcc	2616
gcgctgcgта taaatttacc cctcagttgt gtggaattac caataccaac cttttctaag	2676
gctacggгaa cggggacctt ggaaagctta agtatttccc ctctgaatt атаатagtca	2736
aataaatata tagaacgatt acctaaccag catgggaagg aagcgтгаag gtagggтата	2796
tacccccac cttgtggтсg tgtatataca gatgacagat acgccaaaac cgcatacatc	2856
aaggagctgt tataaaacgc atccattgac atttccgtta acaccgaaac tatagtctga	2916
atcaggtctg gtgtgcgggc tacaatttca tcaataaccg tttgggaaga atctgcaata	2976
tcatattcca tgagttgttg tagagtcggg ttcgtttgта actccgttat aagaccttgг	3036
gttagcgatg tcacacacgc ttgtttaaat acctggттта aaaacatttc ggcgcctggт	3096
ttaaaggcgг gтаagggggt ttgattattt aggacgttag ccaaaaacgg тааacgcгсг	3156
actagctctt ggсgagctgt cacatgtagg ctttggggat tgtcaaccсg ggcatttata	3216
cacgcagcat caataatagc ctgtgcagag tgatataaaa ttggacttcc ggтаатacgt	3276
cctccccagg cagaggatcc gttgтаagat actacaatca acggactggg ggattctгсг	3336
таатgtсгсг gtacaattga taggggacgc cgtttccaga aatctgctgg agtgtccccг	3396
ctaactaatt gggcataaca gatgtсgaac cattccataa gactttgggg ttctgtcgaa	3456
gctggggтаа аcaatagaac gtcttgтаaa ggtgggatgc tggcgгacga attgtttttc	3516
tttcccгтаа atcgcccttg tccaggcgгc tcaaggacgc catcaaagga accgttattg	3576
atcggatctg tgттgгаagt ttgcгctccг tggccctttg cactttgaag caaccagat	3636
gcaacgcggг аactagaagg tcggacggгг tgctggagt тааcaatgtt tacggcccgt	3696
tttattagct caaggacgtc ccgattattt tcctgtatgc gtgtttcagc aggggagtca	3756
tcaatacctc cagaagtтаа ctgtcgatca agatcgatta tggatgaaac gggтccaata	3816
ttgtcccat ttgacgtgtg tgattcaccc atggctгcca ccatatgctc tgcgtatatt	3876

tttatagacg atgcaagacg aggggtgcat cggatatacg caatcagctg tttgcataat	3936
aaaagtaccc gttgtccatc agcaaaataa cgcgttccgt ttgggattag ttctgcatac	3996
ataatacaaa tatcacgggtg cttgcgggtt ccagtattta ttcgtatcgc tacaacgtta	4056
aatgcatcaa agaataaacc ggggctaaga taaacaggca atgataaaat caatccccct	4116
gaattatgcg tggccgaaaa aacgtgtgaa acaaattggtt ccgttttttg tattaagaga	4176
tttgттаagg cgttatcggg aatgtacgcg gcgaaaactt gacaccacgg ttcgcattga	4236
cctgtagcat gatattctgt ttgtacttca accttgaagc gttgtccggg tttctttaaa	4296
atcagtaatg cgggatctat tccggccgca ataagccccg cgtaggtat cacaacgtgt	4356
agtaatcctt ttgtgtgatc attatgccaa agtgcattgt tggtttcatt tgccaaatgg	4416
gcttccatta tacaccggat atggttgtac tggaaaaaaa aaagaaatat gtacgtattc	4476
aaacattttt tacgtacgtg gtattttaagg atacatttaa actttggtgg ggtaactata	4536
tatctttcta tcgttccag ggt atc cga ggt caa gat ttt aat ctt ctg ttt	4588
Gly Ile Arg Gly Gln Asp Phe Asn Leu Leu Phe	
355 360	
gtg gat gaa gct aat ttt att cga cct gat gct gta caa act ata gtc	4636
Val Asp Glu Ala Asn Phe Ile Arg Pro Asp Ala Val Gln Thr Ile Val	
365 370 375	
gga ttt tta aat caa acc aat tgt aaa att att ttt gtt tca tca aca	4684
Gly Phe Leu Asn Gln Thr Asn Cys Lys Ile Ile Phe Val Ser Ser Thr	
380 385 390 395	
aat acc gga aaa gca agt aca agt ttt ttg tat aac tta cgt gga tcg	4732
Asn Thr Gly Lys Ala Ser Thr Ser Phe Leu Tyr Asn Leu Arg Gly Ser	
400 405 410	
tcg gat cag ttg tta aac gtt gtt aca tat gta tgc gac gat cac atg	4780
Ser Asp Gln Leu Leu Asn Val Val Thr Tyr Val Cys Asp Asp His Met	
415 420 425	
ccg cgt gtt tta gca cat agc gat gtc aca gct tgt tcg tgt tat gta	4828
Pro Arg Val Leu Ala His Ser Asp Val Thr Ala Cys Ser Cys Tyr Val	
430 435 440	
tta aat aag ccg gtt ttc atc aca atg gat gga gcc atg cgg cgc act	4876
Leu Asn Lys Pro Val Phe Ile Thr Met Asp Gly Ala Met Arg Arg Thr	
445 450 455	
gca gat tta ttt atg gcc gac tcc ttc gtg cag gaa att gta ggt ggg	4924
Ala Asp Leu Phe Met Ala Asp Ser Phe Val Gln Glu Ile Val Gly Gly	
460 465 470 475	
cgt aaa cag aat tct ggg ggt gtg ggg ttt gac cgg cca tta ttt aca	4972
Arg Lys Gln Asn Ser Gly Gly Val Gly Phe Asp Arg Pro Leu Phe Thr	
480 485 490	
aaa act gcc cgt gag agg ttt att tta tat cgg ccg tca acc gtt gcg	5020
Lys Thr Ala Arg Glu Arg Phe Ile Leu Tyr Arg Pro Ser Thr Val Ala	

495					500					505						
aat	tgt	gct	ata	tta	tcg	tca	gtg	ttg	tac	gtt	tac	gta	gac	cct	gca	5068
Asn	Cys	Ala	Ile	Leu	Ser	Ser	Val	Leu	Tyr	Val	Tyr	Val	Asp	Pro	Ala	
		510					515					520				
ttt	acc	tca	aat	aca	cga	gcg	tct	ggg	act	ggg	gta	gcg	att	gtt	ggg	5116
Phe	Thr	Ser	Asn	Thr	Arg	Ala	Ser	Gly	Thr	Gly	Val	Ala	Ile	Val	Gly	
	525					530					535					
cgt	tat	aag	tcg	gat	tgg	att	ata	ttt	gga	ttg	gag	cac	ttt	ttt	ctt	5164
Arg	Tyr	Lys	Ser	Asp	Trp	Ile	Ile	Phe	Gly	Leu	Glu	His	Phe	Phe	Leu	
540					545					550					555	
aga	gct	tta	act	ggc	acg	tct	tcc	agt	gag	ata	ggg	cgt	tgc	gtt	act	5212
Arg	Ala	Leu	Thr	Gly	Thr	Ser	Ser	Ser	Glu	Ile	Gly	Arg	Cys	Val	Thr	
				560					565					570		
caa	tgc	tta	ggc	cac	ata	ctc	gct	tta	cac	ccc	aat	aca	ttt	aca	aac	5260
Gln	Cys	Leu	Gly	His	Ile	Leu	Ala	Leu	His	Pro	Asn	Thr	Phe	Thr	Asn	
			575					580					585			
gta	cac	gtt	tct	ata	gag	gga	aac	agc	agc	cag	gat	tct	gca	gtt	gcc	5308
Val	His	Val	Ser	Ile	Glu	Gly	Asn	Ser	Ser	Gln	Asp	Ser	Ala	Val	Ala	
		590					595					600				
ata	tcg	ttg	gct	ata	gca	caa	cag	ttt	gct	gtc	ctc	gaa	aag	gga	aac	5356
Ile	Ser	Leu	Ala	Ile	Ala	Gln	Gln	Phe	Ala	Val	Leu	Glu	Lys	Gly	Asn	
	605					610					615					
gtg	cta	tct	tcc	gct	cca	gtg	tta	ctg	ttt	tat	cat	tcc	ata	cct	ccc	5404
Val	Leu	Ser	Ser	Ala	Pro	Val	Leu	Leu	Phe	Tyr	His	Ser	Ile	Pro	Pro	
620					625					630					635	
gga	tgt	agc	gtg	gcg	tac	cct	ttt	ttt	tta	tta	caa	aaa	caa	aaa	acg	5452
Gly	Cys	Ser	Val	Ala	Tyr	Pro	Phe	Phe	Leu	Leu	Gln	Lys	Gln	Lys	Thr	
				640					645					650		
ccg	gcc	gta	gac	tat	ttt	gtt	aaa	cga	ttt	aac	tcc	gga	aat	ata	ata	5500
Pro	Ala	Val	Asp	Tyr	Phe	Val	Lys	Arg	Phe	Asn	Ser	Gly	Asn	Ile	Ile	
			655					660					665			
gcc	tca	cag	gag	ctt	gta	tcc	cta	aca	gta	aag	tta	ggg	gta	gac	ccc	5548
Ala	Ser	Gln	Glu	Leu	Val	Ser	Leu	Thr	Val	Lys	Leu	Gly	Val	Asp	Pro	
		670					675					680				
gtg	gag	tat	cta	tgt	aaa	cag	ttg	gat	aac	ctg	aca	gag	gta	att	aaa	5596
Val	Glu	Tyr	Leu	Cys	Lys	Gln	Leu	Asp	Asn	Leu	Thr	Glu	Val	Ile	Lys	
	685					690					695					
ggc	ggg	atg	ggg	aat	cta	gac	aca	aaa	act	tac	acg	ggg	aaa	ggg	acc	5644
Gly	Gly	Met	Gly	Asn	Leu	Asp	Thr	Lys	Thr	Tyr	Thr	Gly	Lys	Gly	Thr	
700					705					710					715	
acg	gga	aca	atg	tca	gat	gat	ctg	atg	gtt	gca	tta	att	atg	tcc	gtg	5692
Thr	Gly	Thr	Met	Ser	Asp	Asp	Leu	Met	Val	Ala	Leu	Ile	Met	Ser	Val	
				720					725					730		
tat	att	ggc	agt	tca	tgt	ata	ccg	gat	tcc	gtg	ttt	atg	cct	att	aaa	5740
Tyr	Ile	Gly	Ser	Ser	Cys	Ile	Pro	Asp	Ser	Val	Phe	Met	Pro	Ile	Lys	

735

740

745

5743

taa

<210> 81

<211> 747

<212> PRT

<213> Varicella zoster

<400> 81

Met Ser Leu Ile Met Phe Gly Arg Thr Leu Gly Glu Glu Ser Val Arg
 1 5 10 15

Tyr Phe Glu Arg Leu Lys Arg Arg Arg Asp Glu Arg Phe Gly Thr Leu
 20 25 30

Glu Ser Pro Thr Pro Cys Ser Thr Arg Gln Gly Ser Leu Gly Asn Ala
 35 40 45

Thr Gln Ile Pro Phe Leu Asn Phe Ala Ile Asp Val Thr Arg Arg His
 50 55 60

Gln Ala Val Ile Pro Gly Ile Gly Thr Leu His Asn Cys Cys Glu Tyr
 65 70 75 80

Ile Pro Leu Phe Ser Ala Thr Ala Arg Arg Ala Met Phe Gly Ala Phe
 85 90 95

Leu Ser Ser Thr Gly Tyr Asn Cys Thr Pro Asn Val Val Leu Lys Pro
 100 105 110

Trp Arg Tyr Ser Val Asn Ala Asn Val Ser Pro Glu Leu Lys Lys Ala
 115 120 125

Val Ser Ser Val Gln Phe Tyr Glu Tyr Ser Pro Glu Glu Ala Ala Pro
 130 135 140

His Arg Asn Ala Tyr Ser Gly Val Met Asn Thr Phe Arg Ala Phe Ser
 145 150 155 160

Leu Ser Asp Ser Phe Cys Gln Leu Ser Thr Phe Thr Gln Arg Phe Ser
 165 170 175

Tyr Leu Val Glu Thr Ser Phe Glu Ser Ile Glu Glu Cys Gly Ser His
 180 185 190

Gly Lys Arg Ala Lys Val Asp Val Pro Ile Tyr Gly Arg Tyr Lys Gly
 195 200 205

Thr Leu Glu Leu Phe Gln Lys Met Ile Leu Met His Thr Thr His Phe
 210 215 220

Ile Ser Ser Val Leu Leu Gly Asp His Ala Asp Arg Val Asp Cys Phe
 225 230 235 240

Leu Arg Thr Val Phe Asn Thr Pro Ser Val Ser Asp Ser Val Leu Glu
 245 250 255

His Phe Lys Gln Lys Ser Thr Val Phe Leu Val Pro Arg Arg His Gly
 260 265 270

Lys Thr Trp Phe Leu Val Pro Leu Ile Ala Leu Val Met Ala Thr Phe
 275 280 285

Arg Gly Ile Lys Val Gly Tyr Thr Ala His Ile Arg Lys Ala Thr Glu
 290 295 300

Pro Val Phe Glu Gly Ile Lys Ser Arg Leu Glu Gln Trp Phe Gly Ala
 305 310 315 320

Asn Tyr Val Asp His Val Lys Gly Glu Ser Ile Thr Phe Ser Phe Thr
 325 330 335

Asp Gly Ser Tyr Ser Thr Ala Val Phe Ala Ser Ser His Asn Thr Asn
 340 345 350

Gly Ile Arg Gly Gln Asp Phe Asn Leu Leu Phe Val Asp Glu Ala Asn
 355 360 365

Phe Ile Arg Pro Asp Ala Val Gln Thr Ile Val Gly Phe Leu Asn Gln
 370 375 380

Thr Asn Cys Lys Ile Ile Phe Val Ser Ser Thr Asn Thr Gly Lys Ala
 385 390 395 400

Ser Thr Ser Phe Leu Tyr Asn Leu Arg Gly Ser Ser Asp Gln Leu Leu
 405 410 415

Asn Val Val Thr Tyr Val Cys Asp Asp His Met Pro Arg Val Leu Ala
 420 425 430

His Ser Asp Val Thr Ala Cys Ser Cys Tyr Val Leu Asn Lys Pro Val
 435 440 445

Phe Ile Thr Met Asp Gly Ala Met Arg Arg Thr Ala Asp Leu Phe Met
 450 455 460

Ala Asp Ser Phe Val Gln Glu Ile Val Gly Gly Arg Lys Gln Asn Ser
 465 470 475 480

Gly Gly Val Gly Phe Asp Arg Pro Leu Phe Thr Lys Thr Ala Arg Glu
 485 490 495

Arg Phe Ile Leu Tyr Arg Pro Ser Thr Val Ala Asn Cys Ala Ile Leu
 500 505 510

Ser Ser Val Leu Tyr Val Tyr Val Asp Pro Ala Phe Thr Ser Asn Thr
 515 520 525

Arg Ala Ser Gly Thr Gly Val Ala Ile Val Gly Arg Tyr Lys Ser Asp
 530 535 540

Trp Ile Ile Phe Gly Leu Glu His Phe Phe Leu Arg Ala Leu Thr Gly
 545 550 555 560

Thr Ser Ser Ser Glu Ile Gly Arg Cys Val Thr Gln Cys Leu Gly His
 565 570 575

Ile Leu Ala Leu His Pro Asn Thr Phe Thr Asn Val His Val Ser Ile
 580 585 590

Glu Gly Asn Ser Ser Gln Asp Ser Ala Val Ala Ile Ser Leu Ala Ile
 595 600 605

Ala Gln Gln Phe Ala Val Leu Glu Lys Gly Asn Val Leu Ser Ser Ala
 610 615 620

Pro Val Leu Leu Phe Tyr His Ser Ile Pro Pro Gly Cys Ser Val Ala
 625 630 635 640

Tyr Pro Phe Phe Leu Leu Gln Lys Gln Lys Thr Pro Ala Val Asp Tyr
 645 650 655

Phe Val Lys Arg Phe Asn Ser Gly Asn Ile Ile Ala Ser Gln Glu Leu
 660 665 670

Val Ser Leu Thr Val Lys Leu Gly Val Asp Pro Val Glu Tyr Leu Cys
675 680 685

Lys Gln Leu Asp Asn Leu Thr Glu Val Ile Lys Gly Gly Met Gly Asn
690 695 700

Leu Asp Thr Lys Thr Tyr Thr Gly Lys Gly Thr Thr Gly Thr Met Ser
705 710 715 720

Asp Asp Leu Met Val Ala Leu Ile Met Ser Val Tyr Ile Gly Ser Ser
725 730 735

Cys Ile Pro Asp Ser Val Phe Met Pro Ile Lys
740 745

<210> 82
<211> 1308
<212> DNA
<213> Varicella zoster

<220>
<221> CDS
<222> (1)..(1308)

<400> 82
atg gga act caa aag aag ggg ccg cgt tct gaa aaa gtc tcg ccg tac 48
Met Gly Thr Gln Lys Lys Gly Pro Arg Ser Glu Lys Val Ser Pro Tyr
1 5 10 15
gac acc acg aca ccc gag gtg gaa gcg tta gat cat caa atg gat acg 96
Asp Thr Thr Thr Pro Glu Val Glu Ala Leu Asp His Gln Met Asp Thr
20 25 30
ctt aat tgg cga att tgg ata att cag gtg atg atg ttc act ttg ggt 144
Leu Asn Trp Arg Ile Trp Ile Ile Gln Val Met Met Phe Thr Leu Gly
35 40 45
gcg gta atg ctc ctg gct acg tta att gcc gcc tct tct gaa tat acc 192
Ala Val Met Leu Leu Ala Thr Leu Ile Ala Ala Ser Ser Glu Tyr Thr
50 55 60
ggg atc cct tgt ttt tat gct gcc gta gtt gat tat gag tta ttt aac 240
Gly Ile Pro Cys Phe Tyr Ala Ala Val Val Asp Tyr Glu Leu Phe Asn
65 70 75 80
gcc acc cta gat ggg ggg gta tgg tcc gga aat aga ggt gga tac agc 288
Ala Thr Leu Asp Gly Gly Val Trp Ser Gly Asn Arg Gly Gly Tyr Ser
85 90 95
gcc ccg gtt ttg ttt ttg gaa cca cat agc gtt gtg gca ttt act tac 336
Ala Pro Val Leu Phe Leu Glu Pro His Ser Val Val Ala Phe Thr Tyr
100 105 110
tac acg gct tta acg gca atg gcc atg gcg gta tat aca ctg atc acg 384

Tyr	Thr	Ala	Leu	Thr	Ala	Met	Ala	Met	Ala	Val	Tyr	Thr	Leu	Ile	Thr		
		115					120					125					
gcc	gcg	att	ata	cac	cga	gaa	acg	aaa	aat	caa	cgt	gtc	cgg	caa	agc	432	
Ala	Ala	Ile	Ile	His	Arg	Glu	Thr	Lys	Asn	Gln	Arg	Val	Arg	Gln	Ser		
		130				135				140							
tcc	ggt	gtt	gca	tgg	tta	gtt	gta	gat	ccc	aca	aca	ctt	ttt	tgg	ggt	480	
Ser	Gly	Val	Ala	Trp	Leu	Val	Val	Asp	Pro	Thr	Thr	Leu	Phe	Trp	Gly		
		145			150					155					160		
ctt	ttg	tca	ttg	tgg	tta	tta	aac	gcc	gtt	gtg	tta	tta	tta	gct	tac	528	
Leu	Leu	Ser	Leu	Trp	Leu	Leu	Asn	Ala	Val	Val	Leu	Leu	Leu	Ala	Tyr		
				165					170					175			
aag	caa	atc	ggc	gtg	gct	gct	aca	tta	tat	ctt	gga	cat	ttt	gcg	aca	576	
Lys	Gln	Ile	Gly	Val	Ala	Ala	Thr	Leu	Tyr	Leu	Gly	His	Phe	Ala	Thr		
			180					185					190				
agt	gta	ata	ttt	aca	acg	tat	ttt	tgt	gga	cgc	gga	aaa	ttg	gac	gaa	624	
Ser	Val	Ile	Phe	Thr	Thr	Tyr	Phe	Cys	Gly	Arg	Gly	Lys	Leu	Asp	Glu		
		195				200						205					
acg	aac	ata	aaa	gcg	gtc	gca	aat	tta	cga	cag	cag	agc	gtc	ttt	tta	672	
Thr	Asn	Ile	Lys	Ala	Val	Ala	Asn	Leu	Arg	Gln	Gln	Ser	Val	Phe	Leu		
		210				215					220						
tat	cgc	ctt	gcg	ggg	cct	acg	cgc	gca	gtg	ttc	gtg	aat	ttg	atg	gct	720	
Tyr	Arg	Leu	Ala	Gly	Pro	Thr	Arg	Ala	Val	Phe	Val	Asn	Leu	Met	Ala		
		225			230					235					240		
gcg	ttg	atg	gcg	ata	tgt	atc	cta	ttt	gta	tca	tta	atg	ctg	gaa	ctt	768	
Ala	Leu	Met	Ala	Ile	Cys	Ile	Leu	Phe	Val	Ser	Leu	Met	Leu	Glu	Leu		
				245					250					255			
gtg	gtg	gcg	aat	cat	cta	cat	acg	gga	ctg	tgg	tca	tcg	gtg	tcc	gtg	816	
Val	Val	Ala	Asn	His	Leu	His	Thr	Gly	Leu	Trp	Ser	Ser	Val	Ser	Val		
			260					265					270				
gcc	atg	tct	aca	ttt	agt	aca	ttg	tca	gtt	gta	tat	ctt	ata	gta	tca	864	
Ala	Met	Ser	Thr	Phe	Ser	Thr	Leu	Ser	Val	Val	Tyr	Leu	Ile	Val	Ser		
		275					280					285					
gaa	tta	att	ttg	gcg	cat	tat	ata	cac	gtg	tta	ata	gga	ccg	tcc	ctg	912	
Glu	Leu	Ile	Leu	Ala	His	Tyr	Ile	His	Val	Leu	Ile	Gly	Pro	Ser	Leu		
		290				295					300						
gga	acg	ctc	gtg	gcc	tgt	gct	acg	ttg	gga	acc	gcc	gcg	cac	tcg	tat	960	
Gly	Thr	Leu	Val	Ala	Cys	Ala	Thr	Leu	Gly	Thr	Ala	Ala	His	Ser	Tyr		
		305			310				315						320		
atg	gac	cga	tta	tat	gac	cct	ata	tcg	gtt	caa	tct	cca	cgg	tta	att	1008	
Met	Asp	Arg	Leu	Tyr	Asp	Pro	Ile	Ser	Val	Gln	Ser	Pro	Arg	Leu	Ile		
			325					330						335			
ccc	aca	act	cgg	gga	acc	ttg	gct	tgc	ctg	gcc	gtg	ttt	tcc	gtt	gtc	1056	
Pro	Thr	Thr	Arg	Gly	Thr	Leu	Ala	Cys	Leu	Ala	Val	Phe	Ser	Val	Val		
			340					345					350				
atg	ttg	ctt	ctc	aga	ttg	atg	cgt	gca	tat	gtg	tat	cat	cga	cag	aaa	1104	

[illegible]

Met Gly Thr Gln Lys Lys Gly Pro Arg Ser Glu Lys Val Ser Pro Tyr
1 5 10 15

115

120

125

Ala Ala Ile Ile His Arg Glu Thr Lys Asn Gln Arg Val Arg Gln Ser
 130 135 140

Ser Gly Val Ala Trp Leu Val Val Asp Pro Thr Thr Leu Phe Trp Gly
 145 150 155 160

Leu Leu Ser Leu Trp Leu Leu Asn Ala Val Val Leu Leu Leu Ala Tyr
 165 170 175

Lys Gln Ile Gly Val Ala Ala Thr Leu Tyr Leu Gly His Phe Ala Thr
 180 185 190

Ser Val Ile Phe Thr Thr Tyr Phe Cys Gly Arg Gly Lys Leu Asp Glu
 195 200 205

Thr Asn Ile Lys Ala Val Ala Asn Leu Arg Gln Gln Ser Val Phe Leu
 210 215 220

Tyr Arg Leu Ala Gly Pro Thr Arg Ala Val Phe Val Asn Leu Met Ala
 225 230 235 240

Ala Leu Met Ala Ile Cys Ile Leu Phe Val Ser Leu Met Leu Glu Leu
 245 250 255

Val Val Ala Asn His Leu His Thr Gly Leu Trp Ser Ser Val Ser Val
 260 265 270

Ala Met Ser Thr Phe Ser Thr Leu Ser Val Val Tyr Leu Ile Val Ser
 275 280 285

Glu Leu Ile Leu Ala His Tyr Ile His Val Leu Ile Gly Pro Ser Leu
 290 295 300

Gly Thr Leu Val Ala Cys Ala Thr Leu Gly Thr Ala Ala His Ser Tyr
 305 310 315 320

Met Asp Arg Leu Tyr Asp Pro Ile Ser Val Gln Ser Pro Arg Leu Ile
 325 330 335

Pro Thr Thr Arg Gly Thr Leu Ala Cys Leu Ala Val Phe Ser Val Val
 340 345 350

Met Leu Leu Leu Arg Leu Met Arg Ala Tyr Val Tyr His Arg Gln Lys
 432

355

360

365

Arg Ser Arg Phe Tyr Gly Ala Val Arg Arg Val Pro Glu Arg Val Arg
 370 375 380

Gly Tyr Ile Arg Lys Val Lys Pro Ala His Arg Asn Ser Arg Arg Thr
 385 390 395 400

Asn Tyr Pro Ser Gln Gly Tyr Gly Tyr Val Tyr Glu Asn Asp Ser Thr
 405 410 415

Tyr Glu Thr Asp Arg Glu Asp Glu Leu Leu Tyr Glu Arg Ser Asn Ser
 420 425 430

Gly Trp Glu
 435

<210> 84
 <211> 2310
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (1)..(2310)

<400> 84
 atg gcc gaa ata acg tct ctt ttt aat aac agt tcc ggt agt gaa gaa 48
 Met Ala Glu Ile Thr Ser Leu Phe Asn Asn Ser Ser Gly Ser Glu Glu
 1 5 10 15
 aaa agg ata gca agt tct gtt tct att gac cag ggc ttg aat gga agt 96
 Lys Arg Ile Ala Ser Ser Val Ser Ile Asp Gln Gly Leu Asn Gly Ser
 20 25 30
 aac cca aat gac caa tac aag aac atg ttc gat ata tac tgg aat gag 144
 Asn Pro Asn Asp Gln Tyr Lys Asn Met Phe Asp Ile Tyr Trp Asn Glu
 35 40 45
 tac gcc ccg gat ata ggg ttt tgt aca ttt ccg gag gaa gat ggc tgg 192
 Tyr Ala Pro Asp Ile Gly Phe Cys Thr Phe Pro Glu Glu Asp Gly Trp
 50 55 60
 atg tta ata cac cca acc acg caa agt atg ttg ttt cga aaa atc cta 240
 Met Leu Ile His Pro Thr Thr Gln Ser Met Leu Phe Arg Lys Ile Leu
 65 70 75 80
 gcc ggt gac ttt gga tat acc gat gga caa ggc ata tat agc gct gta 288
 Ala Gly Asp Phe Gly Tyr Thr Asp Gly Gln Gly Ile Tyr Ser Ala Val
 85 90 95
 cgg tct acg gaa act gta att cgc caa gtt cag gca acc gtt ttg atg 336
 Arg Ser Thr Glu Thr Val Ile Arg Gln Val Gln Ala Thr Val Leu Met

100						105						110						
aac	gcg	ttg	gat	gca	act	cgg	tat	gag	gac	cta	gca	gca	gat	tgg	gaa			384
Asn	Ala	Leu	Asp	Ala	Thr	Arg	Tyr	Glu	Asp	Leu	Ala	Ala	Asp	Trp	Glu			
		115					120					125						
cac	cac	atc	caa	caa	tgt	aac	ctg	cat	gcc	ggg	gct	cta	gcg	gaa	cgt			432
His	His	Ile	Gln	Gln	Cys	Asn	Leu	His	Ala	Gly	Ala	Leu	Ala	Glu	Arg			
	130					135					140							
tat	ggg	cta	tgt	gga	gaa	tca	gaa	gcc	gta	cgg	ctt	gca	cat	cag	gtt			480
Tyr	Gly	Leu	Cys	Gly	Glu	Ser	Glu	Ala	Val	Arg	Leu	Ala	His	Gln	Val			
145					150					155					160			
ttt	gaa	acc	tgg	cgt	caa	aca	tta	cag	tca	tcg	tta	ctt	gag	ttt	ctg			528
Phe	Glu	Thr	Trp	Arg	Gln	Thr	Leu	Gln	Ser	Ser	Leu	Leu	Glu	Phe	Leu			
				165					170					175				
cgt	gga	ata	acc	ggt	tgt	ctc	tat	acc	agt	ggt	tta	aat	gga	agg	gtc			576
Arg	Gly	Ile	Thr	Gly	Cys	Leu	Tyr	Thr	Ser	Gly	Leu	Asn	Gly	Arg	Val			
			180					185					190					
ggt	ttt	gcc	aaa	tac	gtg	gac	tgg	ata	gcc	tgt	gta	ggt	att	gtg	ccc			624
Gly	Phe	Ala	Lys	Tyr	Val	Asp	Trp	Ile	Ala	Cys	Val	Gly	Ile	Val	Pro			
		195					200					205						
gtt	gta	aga	aag	gta	cga	tca	gaa	cag	aat	gga	acc	cct	gca	cca	tta			672
Val	Val	Arg	Lys	Val	Arg	Ser	Glu	Gln	Asn	Gly	Thr	Pro	Ala	Pro	Leu			
	210					215					220							
aat	acg	tat	atg	ggt	caa	gcg	gca	gaa	ctg	tcc	cag	atg	tta	aaa	gtt			720
Asn	Thr	Tyr	Met	Gly	Gln	Ala	Ala	Glu	Leu	Ser	Gln	Met	Leu	Lys	Val			
225					230				235					240				
gcc	gat	gca	acg	ttg	gcc	aga	gga	gcg	gcg	gtt	gtc	aca	agc	cta	gtt			768
Ala	Asp	Ala	Thr	Leu	Ala	Arg	Gly	Ala	Ala	Val	Val	Thr	Ser	Leu	Val			
				245					250					255				
gag	tgt	atg	caa	aat	gtt	gct	att	atg	gat	tat	gat	agg	acg	cgt	ctt			816
Glu	Cys	Met	Gln	Asn	Val	Ala	Ile	Met	Asp	Tyr	Asp	Arg	Thr	Arg	Leu			
			260					265					270					
tat	tat	aat	tat	aac	cga	aga	tta	att	atg	gca	aag	gat	gat	gta	acg			864
Tyr	Tyr	Asn	Tyr	Asn	Arg	Arg	Leu	Ile	Met	Ala	Lys	Asp	Asp	Val	Thr			
		275					280					285						
ggc	atg	aag	gga	gag	tgt	ttg	gtc	gtg	tgg	ccg	ccc	gtt	gta	tgt	ggg			912
Gly	Met	Lys	Gly	Glu	Cys	Leu	Val	Val	Trp	Pro	Pro	Val	Val	Cys	Gly			
	290					295					300							
gag	ggt	gta	gta	ttt	gac	tca	ccc	tta	cag	cgg	ctt	tct	ggg	gag	gtg			960
Glu	Gly	Val	Val	Phe	Asp	Ser	Pro	Leu	Gln	Arg	Leu	Ser	Gly	Glu	Val			
305					310					315					320			
ttg	gcc	tgt	tat	gca	tta	cgt	gaa	cat	gct	cgc	gtc	tgc	caa	gtt	tta			1008
Leu	Ala	Cys	Tyr	Ala	Leu	Arg	Glu	His	Ala	Arg	Val	Cys	Gln	Val	Leu			
				325					330					335				
aat	aca	gcc	cct	ttg	cgc	gtg	tta	ata	ggt	cgc	cgg	aat	gaa	gat	gat			1056
Asn	Thr	Ala	Pro	Leu	Arg	Val	Leu	Ile	Gly	Arg	Arg	Asn	Glu	Asp	Asp			

340					345					350						
aga	tct	cac	agc	aca	cgt	gcg	gtt	gat	cgt	ata	atg	ggc	gag	aac	gat	1104
Arg	Ser	His	Ser	Thr	Arg	Ala	Val	Asp	Arg	Ile	Met	Gly	Glu	Asn	Asp	
		355					360					365				
aca	aca	cgg	gct	gga	tcg	gcc	gcg	tct	aga	ctt	gta	aag	cta	ata	gtt	1152
Thr	Thr	Arg	Ala	Gly	Ser	Ala	Ala	Ser	Arg	Leu	Val	Lys	Leu	Ile	Val	
		370					375				380					
aac	tta	aaa	aac	atg	aga	cat	gtt	gga	gat	att	acc	gaa	acc	gta	cgt	1200
Asn	Leu	Lys	Asn	Met	Arg	His	Val	Gly	Asp	Ile	Thr	Glu	Thr	Val	Arg	
					390					395					400	
tcc	tat	cta	gaa	gaa	acg	ggc	aat	cac	att	ctg	gaa	gga	agt	gga	tcg	1248
Ser	Tyr	Leu	Glu	Glu	Thr	Gly	Asn	His	Ile	Leu	Glu	Gly	Ser	Gly	Ser	
				405					410					415		
gtg	gac	aca	tca	caa	ccg	ggg	ttt	ggc	aag	gcc	aac	caa	tcc	ttt	aac	1296
Val	Asp	Thr	Ser	Gln	Pro	Gly	Phe	Gly	Lys	Ala	Asn	Gln	Ser	Phe	Asn	
			420					425					430			
ggg	ggg	gca	atg	tcc	gga	aca	aca	aac	gtt	caa	agt	gcg	ttt	aaa	act	1344
Gly	Gly	Ala	Met	Ser	Gly	Thr	Thr	Asn	Val	Gln	Ser	Ala	Phe	Lys	Thr	
		435					440					445				
tcg	gtg	gtt	aac	agt	atc	aac	ggc	atg	ctc	gag	ggg	tat	gtg	aat	aat	1392
Ser	Val	Val	Asn	Ser	Ile	Asn	Gly	Met	Leu	Glu	Gly	Tyr	Val	Asn	Asn	
		450				455					460					
tta	ttc	aaa	acc	att	gag	ggg	ctc	aag	gat	gtg	aac	agc	gat	ctg	acc	1440
Leu	Phe	Lys	Thr	Ile	Glu	Gly	Leu	Lys	Asp	Val	Asn	Ser	Asp	Leu	Thr	
					470					475					480	
gaa	agg	ctc	cag	ttc	aaa	gaa	gga	gag	ctg	aaa	cgg	tta	cgg	gaa	gag	1488
Glu	Arg	Leu	Gln	Phe	Lys	Glu	Gly	Glu	Leu	Lys	Arg	Leu	Arg	Glu	Glu	
				485					490					495		
agg	gta	aaa	ata	aag	cca	tct	aaa	ggg	tca	cat	att	aca	atg	gca	gaa	1536
Arg	Val	Lys	Ile	Lys	Pro	Ser	Lys	Gly	Ser	His	Ile	Thr	Met	Ala	Glu	
			500					505					510			
gaa	aca	cgt	att	gcc	gat	tta	aat	cac	gag	gtt	ata	gat	ctt	acc	ggc	1584
Glu	Thr	Arg	Ile	Ala	Asp	Leu	Asn	His	Glu	Val	Ile	Asp	Leu	Thr	Gly	
		515					520					525				
ata	ata	ggg	gat	gat	gca	tat	att	gcc	aat	agt	ttt	caa	tct	cgt	tat	1632
Ile	Ile	Gly	Asp	Asp	Ala	Tyr	Ile	Ala	Asn	Ser	Phe	Gln	Ser	Arg	Tyr	
		530				535					540					
atc	ccc	cct	tat	gga	gat	gat	ata	aaa	cgt	ttg	tct	gag	cta	tgg	aaa	1680
Ile	Pro	Pro	Tyr	Gly	Asp	Asp	Ile	Lys	Arg	Leu	Ser	Glu	Leu	Trp	Lys	
					550					555					560	
cag	gaa	ctt	gtt	cgc	tgt	ttt	aag	ctt	cac	cgg	gta	aac	aat	aat	caa	1728
Gln	Glu	Leu	Val	Arg	Cys	Phe	Lys	Leu	His	Arg	Val	Asn	Asn	Asn	Gln	
				565				570					575			
ggc	cag	gaa	att	tct	gta	tca	tat	tca	aat	gcg	tca	atc	tca	tta	cta	1776
Gly	Gln	Glu	Ile	Ser	Val	Ser	Tyr	Ser	Asn	Ala	Ser	Ile	Ser	Leu	Leu	

580					585					590						
gtt	gcg	ccg	tat	ttt	tca	ttc	ata	tta	cgg	gcc	acc	cga	tta	gga	ttc	1824
Val	Ala	Pro	Tyr	Phe	Ser	Phe	Ile	Leu	Arg	Ala	Thr	Arg	Leu	Gly	Phe	
		595					600					605				
ttg	gta	act	caa	agc	gag	gta	cat	agg	tca	gag	gaa	gag	tta	tgc	cag	1872
Leu	Val	Thr	Gln	Ser	Glu	Val	His	Arg	Ser	Glu	Glu	Glu	Leu	Cys	Gln	
	610					615					620					
gct	att	ttt	aaa	aag	gcg	aga	aca	gag	tcc	tat	tta	tcc	caa	atc	cga	1920
Ala	Ile	Phe	Lys	Lys	Ala	Arg	Thr	Glu	Ser	Tyr	Leu	Ser	Gln	Ile	Arg	
625					630				635						640	
ata	tta	tat	gaa	atg	cag	gtt	cgc	gca	gag	gta	ata	aaa	cgg	ggc	cca	1968
Ile	Leu	Tyr	Glu	Met	Gln	Val	Arg	Ala	Glu	Val	Ile	Lys	Arg	Gly	Pro	
			645						650					655		
cgg	aga	aca	cca	agt	cct	tcc	tgg	ggt	ttg	cct	gac	cct	aca	gaa	gat	2016
Arg	Arg	Thr	Pro	Ser	Pro	Ser	Trp	Gly	Leu	Pro	Asp	Pro	Thr	Glu	Asp	
			660					665					670			
gac	gaa	aga	atc	ccg	gaa	ccc	aat	aaa	ata	aat	aac	caa	tac	atg	cat	2064
Asp	Glu	Arg	Ile	Pro	Glu	Pro	Asn	Lys	Ile	Asn	Asn	Gln	Tyr	Met	His	
		675					680					685				
gtt	gga	tat	aaa	aac	cta	tcc	cat	ttt	atg	aaa	gga	cac	ccc	cct	gag	2112
Val	Gly	Tyr	Lys	Asn	Leu	Ser	His	Phe	Met	Lys	Gly	His	Pro	Pro	Glu	
	690					695					700					
agg	tta	cgg	gta	cac	aag	gta	aat	gca	gcg	gat	tcg	acc	tta	ctg	gat	2160
Arg	Leu	Arg	Val	His	Lys	Val	Asn	Ala	Ala	Asp	Ser	Thr	Leu	Leu	Asp	
705					710					715					720	
aaa	att	cga	gca	aac	cgg	agg	cgc	ggg	gat	ggc	cga	tgg	gat	gtc	cgg	2208
Lys	Ile	Arg	Ala	Asn	Arg	Arg	Arg	Gly	Asp	Gly	Arg	Trp	Asp	Val	Arg	
				725					730					735		
aat	aaa	tat	acc	cag	cat	ttt	agg	ttg	cag	cgt	aac	gat	cga	caa	ctt	2256
Asn	Lys	Tyr	Thr	Gln	His	Phe	Arg	Leu	Gln	Arg	Asn	Asp	Arg	Gln	Leu	
			740					745					750			
act	aac	acg	agc	cga	aga	ggg	gtt	gga	tgt	gag	cga	cgt	gat	cga	aga	2304
Thr	Asn	Thr	Ser	Arg	Arg	Gly	Val	Gly	Cys	Glu	Arg	Arg	Asp	Arg	Arg	
		755					760					765				
tct	tag															2310
Ser																

<210> 85
 <211> 769
 <212> PRT
 <213> Varicella zoster

<400> 85

Met	Ala	Glu	Ile	Thr	Ser	Leu	Phe	Asn	Asn	Ser	Ser	Gly	Ser	Glu	Glu
1				5					10					15	

Glu Cys Met Gln Asn Val Ala Ile Met Asp Tyr Asp Arg Thr Arg Leu
260 265 270

Tyr Tyr Asn Tyr Asn Arg Arg Leu Ile Met Ala Lys Asp Asp Val Thr
275 280 285

Gly Met Lys Gly Glu Cys Leu Val Val Trp Pro Pro Val Val Cys Gly
290 295 300

Glu Gly Val Val Phe Asp Ser Pro Leu Gln Arg Leu Ser Gly Glu Val
305 310 315 320

Leu Ala Cys Tyr Ala Leu Arg Glu His Ala Arg Val Cys Gln Val Leu
325 330 335

Asn Thr Ala Pro Leu Arg Val Leu Ile Gly Arg Arg Asn Glu Asp Asp
340 345 350

Arg Ser His Ser Thr Arg Ala Val Asp Arg Ile Met Gly Glu Asn Asp
355 360 365

Thr Thr Arg Ala Gly Ser Ala Ala Ser Arg Leu Val Lys Leu Ile Val
370 375 380

Asn Leu Lys Asn Met Arg His Val Gly Asp Ile Thr Glu Thr Val Arg
385 390 395 400

Ser Tyr Leu Glu Glu Thr Gly Asn His Ile Leu Glu Gly Ser Gly Ser
405 410 415

Val Asp Thr Ser Gln Pro Gly Phe Gly Lys Ala Asn Gln Ser Phe Asn
420 425 430

Gly Gly Ala Met Ser Gly Thr Thr Asn Val Gln Ser Ala Phe Lys Thr
435 440 445

Ser Val Val Asn Ser Ile Asn Gly Met Leu Glu Gly Tyr Val Asn Asn
450 455 460

Leu Phe Lys Thr Ile Glu Gly Leu Lys Asp Val Asn Ser Asp Leu Thr
465 470 475 480

Glu Arg Leu Gln Phe Lys Glu Gly Glu Leu Lys Arg Leu Arg Glu Glu
485 490 495

Arg Val Lys Ile Lys Pro Ser Lys Gly Ser His Ile Thr Met Ala Glu
500 505 510

Glu Thr Arg Ile Ala Asp Leu Asn His Glu Val Ile Asp Leu Thr Gly
515 520 525

Ile Ile Gly Asp Asp Ala Tyr Ile Ala Asn Ser Phe Gln Ser Arg Tyr
530 535 540

Ile Pro Pro Tyr Gly Asp Asp Ile Lys Arg Leu Ser Glu Leu Trp Lys
545 550 555 560

Gln Glu Leu Val Arg Cys Phe Lys Leu His Arg Val Asn Asn Asn Gln
565 570 575

Gly Gln Glu Ile Ser Val Ser Tyr Ser Asn Ala Ser Ile Ser Leu Leu
580 585 590

Val Ala Pro Tyr Phe Ser Phe Ile Leu Arg Ala Thr Arg Leu Gly Phe
595 600 605

Leu Val Thr Gln Ser Glu Val His Arg Ser Glu Glu Glu Leu Cys Gln
610 615 620

Ala Ile Phe Lys Lys Ala Arg Thr Glu Ser Tyr Leu Ser Gln Ile Arg
625 630 635 640

Ile Leu Tyr Glu Met Gln Val Arg Ala Glu Val Ile Lys Arg Gly Pro
645 650 655

Arg Arg Thr Pro Ser Pro Ser Trp Gly Leu Pro Asp Pro Thr Glu Asp
660 665 670

Asp Glu Arg Ile Pro Glu Pro Asn Lys Ile Asn Asn Gln Tyr Met His
675 680 685

Val Gly Tyr Lys Asn Leu Ser His Phe Met Lys Gly His Pro Pro Glu
690 695 700

Arg Leu Arg Val His Lys Val Asn Ala Ala Asp Ser Thr Leu Leu Asp
705 710 715 720

Lys Ile Arg Ala Asn Arg Arg Arg Gly Asp Gly Arg Trp Asp Val Arg
725 730 735

Asn Lys Tyr Thr Gln His Phe Arg Leu Gln Arg Asn Asp Arg Gln Leu
740 745 750

Thr Asn Thr Ser Arg Arg Gly Val Gly Cys Glu Arg Arg Asp Arg Arg
755 760 765

Ser

<210> 86
<211> 666
<212> DNA
<213> Varicella zoster

<220>
<221> CDS
<222> (1)..(666)

<400> 86
atg ttt tcg gag ttg cct cct tcc gta ccg acg gca ttg ctt caa tgg 48
Met Phe Ser Glu Leu Pro Pro Ser Val Pro Thr Ala Leu Leu Gln Trp
1 5 10 15
ggt tgg gga ttg cat cgt gga ccg tgt tcg atc cca aat ttt aaa cag 96
Gly Trp Gly Leu His Arg Gly Pro Cys Ser Ile Pro Asn Phe Lys Gln
20 25 30
gta gcc agc caa cac agt gtt cag aac gat ttt aca gaa aat agc gtt 144
Val Ala Ser Gln His Ser Val Gln Asn Asp Phe Thr Glu Asn Ser Val
35 40 45
gat gca aat gaa aaa ttt ccg att ggg cac gcg ggc tgt att gag aaa 192
Asp Ala Asn Glu Lys Phe Pro Ile Gly His Ala Gly Cys Ile Glu Lys
50 55 60
acc aaa gac gac tat gta cca ttt gat acg ttg ttc atg gta tca tct 240
Thr Lys Asp Asp Tyr Val Pro Phe Asp Thr Leu Phe Met Val Ser Ser
65 70 75 80
att gac gaa ctt ggg cgg aga caa tta acc gac acc atc cgc cgc agc 288
Ile Asp Glu Leu Gly Arg Arg Gln Leu Thr Asp Thr Ile Arg Arg Ser
85 90 95
ttg gtt atg aac gcc tgt gaa ata acg gtc gcg tgt acg aaa acc gca 336
Leu Val Met Asn Ala Cys Glu Ile Thr Val Ala Cys Thr Lys Thr Ala
100 105 110
gcc ttt tct ggt cga ggc gtg tca cga caa aaa cac gtg acc cta tct 384
Ala Phe Ser Gly Arg Gly Val Ser Arg Gln Lys His Val Thr Leu Ser
115 120 125
aaa aat aaa ttc aat cca tcc agt cat aag agc ctg caa atg ttt gtg 432
Lys Asn Lys Phe Asn Pro Ser Ser His Lys Ser Leu Gln Met Phe Val
130 135 140

ttg	tgt	caa	aaa	acc	cat	gca	ccc	cgt	gtc	aga	aac	cta	ctg	tac	gag	480
Leu	Cys	Gln	Lys	Thr	His	Ala	Pro	Arg	Val	Arg	Asn	Leu	Leu	Tyr	Glu	
145					150					155					160	
agt	att	cgt	gca	aga	aga	cct	cgc	cga	tat	tac	acc	cgc	tca	acg	gac	528
Ser	Ile	Arg	Ala	Arg	Arg	Pro	Arg	Arg	Tyr	Tyr	Thr	Arg	Ser	Thr	Asp	
				165					170					175		
gga	aaa	tcg	cgt	ccg	ttg	gta	cca	gtg	ttt	gtg	tat	gag	ttt	acg	gct	576
Gly	Lys	Ser	Arg	Pro	Leu	Val	Pro	Val	Phe	Val	Tyr	Glu	Phe	Thr	Ala	
			180					185					190			
tta	gat	cgt	gtc	ctt	tta	cat	aag	gaa	aat	act	ttg	acc	gac	caa	cca	624
Leu	Asp	Arg	Val	Leu	Leu	His	Lys	Glu	Asn	Thr	Leu	Thr	Asp	Gln	Pro	
		195					200					205				
att	aat	act	gaa	aat	agc	ggc	cat	gga	cgt	acg	aga	acg	taa			666
Ile	Asn	Thr	Glu	Asn	Ser	Gly	His	Gly	Arg	Thr	Arg	Thr				
	210					215					220					

<210> 87
 <211> 221
 <212> PRT
 <213> Varicella zoster

<400> 87

Met	Phe	Ser	Glu	Leu	Pro	Pro	Ser	Val	Pro	Thr	Ala	Leu	Leu	Gln	Trp
1				5					10					15	
Gly	Trp	Gly	Leu	His	Arg	Gly	Pro	Cys	Ser	Ile	Pro	Asn	Phe	Lys	Gln
			20					25					30		
Val	Ala	Ser	Gln	His	Ser	Val	Gln	Asn	Asp	Phe	Thr	Glu	Asn	Ser	Val
		35					40					45			
Asp	Ala	Asn	Glu	Lys	Phe	Pro	Ile	Gly	His	Ala	Gly	Cys	Ile	Glu	Lys
	50					55					60				
Thr	Lys	Asp	Asp	Tyr	Val	Pro	Phe	Asp	Thr	Leu	Phe	Met	Val	Ser	Ser
65					70					75				80	
Ile	Asp	Glu	Leu	Gly	Arg	Arg	Gln	Leu	Thr	Asp	Thr	Ile	Arg	Arg	Ser
				85					90					95	
Leu	Val	Met	Asn	Ala	Cys	Glu	Ile	Thr	Val	Ala	Cys	Thr	Lys	Thr	Ala
			100					105					110		
Ala	Phe	Ser	Gly	Arg	Gly	Val	Ser	Arg	Gln	Lys	His	Val	Thr	Leu	Ser
		115					120					125			

Lys Asn Lys Phe Asn Pro Ser Ser His Lys Ser Leu Gln Met Phe Val
 130 135 140

Leu Cys Gln Lys Thr His Ala Pro Arg Val Arg Asn Leu Leu Tyr Glu
 145 150 155 160

Ser Ile Arg Ala Arg Arg Pro Arg Arg Tyr Tyr Thr Arg Ser Thr Asp
 165 170 175

Gly Lys Ser Arg Pro Leu Val Pro Val Phe Val Tyr Glu Phe Thr Ala
 180 185 190

Leu Asp Arg Val Leu Leu His Lys Glu Asn Thr Leu Thr Asp Gln Pro
 195 200 205

Ile Asn Thr Glu Asn Ser Gly His Gly Arg Thr Arg Thr
 210 215 220

<210> 88
 <211> 480
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (1)..(480)

<400> 88
 atg gca tca cat aaa tgg tta ctg cag ata gtt ttt tta aaa act atc 48
 Met Ala Ser His Lys Trp Leu Leu Gln Ile Val Phe Leu Lys Thr Ile
 1 5 10 15
 aca atc gcg tat tgt ctt cat ctc caa gac gac act ccg ttg ttt ttt 96
 Thr Ile Ala Tyr Cys Leu His Leu Gln Asp Asp Thr Pro Leu Phe Phe
 20 25 30
 gga gcc aaa ccg cta tcg gat gtg agt ttg att ata acg gaa ccg tgc 144
 Gly Ala Lys Pro Leu Ser Asp Val Ser Leu Ile Ile Thr Glu Pro Cys
 35 40 45
 gtg tca tcg gta tat gag gcg tgg gac tat gcg gca ccc ccg gta tca 192
 Val Ser Ser Val Tyr Glu Ala Trp Asp Tyr Ala Ala Pro Pro Val Ser
 50 55 60
 aac ctc agc gag gcg cta tcg gga atc gtg gtt aag aca aaa tgt cca 240
 Asn Leu Ser Glu Ala Leu Ser Gly Ile Val Val Lys Thr Lys Cys Pro
 65 70 75 80
 gta ccg gaa gtt ata ctt tgg ttt aaa gac aaa caa atg gcg tac tgg 288
 Val Pro Glu Val Ile Leu Trp Phe Lys Asp Lys Gln Met Ala Tyr Trp
 85 90 95

aca	aat	cca	tac	gtc	acc	tta	aag	ggg	ctg	gca	caa	tct	ggt	ggt	gaa	336
Thr	Asn	Pro	Tyr	Val	Thr	Leu	Lys	Gly	Leu	Ala	Gln	Ser	Val	Gly	Glu	
			100					105					110			

gaa	cat	aaa	agc	ggg	gac	ata	cgc	gat	gct	ttg	ttg	gat	gcc	ctt	tcc	384
Glu	His	Lys	Ser	Gly	Asp	Ile	Arg	Asp	Ala	Leu	Leu	Asp	Ala	Leu	Ser	
		115					120					125				

ggt	gta	tgg	gta	gac	tct	act	cca	tct	tcc	aca	aat	atc	ccg	gaa	aat	432
Gly	Val	Trp	Val	Asp	Ser	Thr	Pro	Ser	Ser	Thr	Asn	Ile	Pro	Glu	Asn	
	130					135					140					

gga	tgt	gtc	tgg	gga	gcc	gac	cgt	ttg	ttc	caa	cgc	gta	tgc	caa	tga	480
Gly	Cys	Val	Trp	Gly	Ala	Asp	Arg	Leu	Phe	Gln	Arg	Val	Cys	Gln		
145					150					155						

<210> 89
 <211> 159
 <212> PRT
 <213> Varicella zoster

<400> 89

Met	Ala	Ser	His	Lys	Trp	Leu	Leu	Gln	Ile	Val	Phe	Leu	Lys	Thr	Ile
1				5					10					15	

Thr	Ile	Ala	Tyr	Cys	Leu	His	Leu	Gln	Asp	Asp	Thr	Pro	Leu	Phe	Phe
			20					25					30		

Gly	Ala	Lys	Pro	Leu	Ser	Asp	Val	Ser	Leu	Ile	Ile	Thr	Glu	Pro	Cys
		35					40					45			

Val	Ser	Ser	Val	Tyr	Glu	Ala	Trp	Asp	Tyr	Ala	Ala	Pro	Pro	Val	Ser
	50					55					60				

Asn	Leu	Ser	Glu	Ala	Leu	Ser	Gly	Ile	Val	Val	Lys	Thr	Lys	Cys	Pro
65					70					75					80

Val	Pro	Glu	Val	Ile	Leu	Trp	Phe	Lys	Asp	Lys	Gln	Met	Ala	Tyr	Trp
				85					90					95	

Thr	Asn	Pro	Tyr	Val	Thr	Leu	Lys	Gly	Leu	Ala	Gln	Ser	Val	Gly	Glu
			100					105					110		

Glu	His	Lys	Ser	Gly	Asp	Ile	Arg	Asp	Ala	Leu	Leu	Asp	Ala	Leu	Ser
		115					120					125			

Gly	Val	Trp	Val	Asp	Ser	Thr	Pro	Ser	Ser	Thr	Asn	Ile	Pro	Glu	Asn
	130					135					140				

Gly Cys Val Trp Gly Ala Asp Arg Leu Phe Gln Arg Val Cys Gln
 145 150 155

<210> 90
 <211> 909
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (1)..(909)

<400> 90
 atg gct tct gta gca ggt aac gct agt aat atc tca cca cag ccc ccg 48
 Met Ala Ser Val Ala Gly Asn Ala Ser Asn Ile Ser Pro Gln Pro Pro
 1 5 10 15
 tcg ggc gtt cca acc gga ggg gaa ttt gta ctg ata cct acc gcg tat 96
 Ser Gly Val Pro Thr Gly Gly Glu Phe Val Leu Ile Pro Thr Ala Tyr
 20 25 30
 tat tca cag ctg tta acc ggg cag act aaa aat ccg cag gta tca att 144
 Tyr Ser Gln Leu Leu Thr Gly Gln Thr Lys Asn Pro Gln Val Ser Ile
 35 40 45
 gga gct cca aat aac gga cag tat atc gtc ggg cca tat gga tct cca 192
 Gly Ala Pro Asn Asn Gly Gln Tyr Ile Val Gly Pro Tyr Gly Ser Pro
 50 55 60
 cac ccg cct gcc ttc cca cct aat aca ggg ggt tat ggt tgc cct ccg 240
 His Pro Pro Ala Phe Pro Pro Asn Thr Gly Gly Tyr Gly Cys Pro Pro
 65 70 75 80
 gga cac ttc ggg gga ccg tac ggg ttt ccg gga tat cca cca ccc aat 288
 Gly His Phe Gly Gly Pro Tyr Gly Phe Pro Gly Tyr Pro Pro Pro Asn
 85 90 95
 cgt ttg gaa atg caa atg tcc gca ttt atg aac gca ttg gcc gcc gaa 336
 Arg Leu Glu Met Gln Met Ser Ala Phe Met Asn Ala Leu Ala Ala Glu
 100 105 110
 cgg ggt att gac ttg cag acc ccg tgt gta aat ttt cca gac aaa acc 384
 Arg Gly Ile Asp Leu Gln Thr Pro Cys Val Asn Phe Pro Asp Lys Thr
 115 120 125
 gat gtc cgt cgt cca gga aaa cgg gat ttc aag agc atg gat caa agg 432
 Asp Val Arg Arg Pro Gly Lys Arg Asp Phe Lys Ser Met Asp Gln Arg
 130 135 140
 gaa ttg gat tct ttt tat agt ggg gag tct caa atg gac gga gag ttt 480
 Glu Leu Asp Ser Phe Tyr Ser Gly Glu Ser Gln Met Asp Gly Glu Phe
 145 150 155 160
 ccc tca aat ata tat ttt ccc ggt gaa cca acg tat ata acg cat cgg 528
 Pro Ser Asn Ile Tyr Phe Pro Gly Glu Pro Thr Tyr Ile Thr His Arg
 165 170 175
 aga cgt cga gtt tct cca tca tat tgg cag agg aga cac aga gtt tct 576

Arg	Arg	Arg	Val	Ser	Pro	Ser	Tyr	Trp	Gln	Arg	Arg	His	Arg	Val	Ser		
			180					185					190				
aat	ggt	cag	cac	gaa	gag	ctt	gct	ggg	ggt	gtg	gca	aaa	ctg	caa	cag	624	
Asn	Gly	Gln	His	Glu	Glu	Leu	Ala	Gly	Val	Val	Ala	Lys	Leu	Gln	Gln		
		195					200					205					
gag	ggt	aca	gag	cta	aaa	tca	caa	aat	ggg	aca	caa	atg	cct	ttg	tcg	672	
Glu	Val	Thr	Glu	Leu	Lys	Ser	Gln	Asn	Gly	Thr	Gln	Met	Pro	Leu	Ser		
		210				215					220						
cac	cat	aca	aat	ata	cca	gag	ggg	aca	cgg	gat	cct	cga	ata	tcg	att	720	
His	His	Thr	Asn	Ile	Pro	Glu	Gly	Thr	Arg	Asp	Pro	Arg	Ile	Ser	Ile		
225					230				235						240		
tta	tta	aaa	cag	ctt	caa	agc	ggt	tcg	ggg	cta	tgc	tca	tcc	caa	aat	768	
Leu	Leu	Lys	Gln	Leu	Gln	Ser	Val	Ser	Gly	Leu	Cys	Ser	Ser	Gln	Asn		
				245				250						255			
aca	aca	agc	acc	cca	cat	aca	gat	aca	ggt	gga	caa	gat	gta	aat	gca	816	
Thr	Thr	Ser	Thr	Pro	His	Thr	Asp	Thr	Val	Gly	Gln	Asp	Val	Asn	Ala		
			260					265					270				
gtg	gag	gcg	agt	tcc	aag	gcc	cct	tta	ata	cag	ggg	tcc	acg	gca	gac	864	
Val	Glu	Ala	Ser	Ser	Lys	Ala	Pro	Leu	Ile	Gln	Gly	Ser	Thr	Ala	Asp		
		275					280					285					
gac	gcc	gat	atg	ttt	gca	aat	cag	atg	atg	gtg	ggg	cgg	tgt	taa		909	
Asp	Ala	Asp	Met	Phe	Ala	Asn	Gln	Met	Met	Val	Gly	Arg	Cys				
	290					295					300						

<210> 91
 <211> 302
 <212> PRT
 <213> Varicella zoster

<400> 91

Met	Ala	Ser	Val	Ala	Gly	Asn	Ala	Ser	Asn	Ile	Ser	Pro	Gln	Pro	Pro		
1				5					10					15			
Ser	Gly	Val	Pro	Thr	Gly	Gly	Glu	Phe	Val	Leu	Ile	Pro	Thr	Ala	Tyr		
			20					25					30				
Tyr	Ser	Gln	Leu	Leu	Thr	Gly	Gln	Thr	Lys	Asn	Pro	Gln	Val	Ser	Ile		
		35					40					45					
Gly	Ala	Pro	Asn	Asn	Gly	Gln	Tyr	Ile	Val	Gly	Pro	Tyr	Gly	Ser	Pro		
	50					55					60						
His	Pro	Pro	Ala	Phe	Pro	Pro	Asn	Thr	Gly	Gly	Tyr	Gly	Cys	Pro	Pro		
65					70					75					80		
Gly	His	Phe	Gly	Gly	Pro	Tyr	Gly	Phe	Pro	Gly	Tyr	Pro	Pro	Pro	Asn		

85

90

95

Arg Leu Glu Met Gln Met Ser Ala Phe Met Asn Ala Leu Ala Ala Glu
 100 105 110

Arg Gly Ile Asp Leu Gln Thr Pro Cys Val Asn Phe Pro Asp Lys Thr
 115 120 125

Asp Val Arg Arg Pro Gly Lys Arg Asp Phe Lys Ser Met Asp Gln Arg
 130 135 140

Glu Leu Asp Ser Phe Tyr Ser Gly Glu Ser Gln Met Asp Gly Glu Phe
 145 150 155 160

Pro Ser Asn Ile Tyr Phe Pro Gly Glu Pro Thr Tyr Ile Thr His Arg
 165 170 175

Arg Arg Arg Val Ser Pro Ser Tyr Trp Gln Arg Arg His Arg Val Ser
 180 185 190

Asn Gly Gln His Glu Glu Leu Ala Gly Val Val Ala Lys Leu Gln Gln
 195 200 205

Glu Val Thr Glu Leu Lys Ser Gln Asn Gly Thr Gln Met Pro Leu Ser
 210 215 220

His His Thr Asn Ile Pro Glu Gly Thr Arg Asp Pro Arg Ile Ser Ile
 225 230 235 240

Leu Leu Lys Gln Leu Gln Ser Val Ser Gly Leu Cys Ser Ser Gln Asn
 245 250 255

Thr Thr Ser Thr Pro His Thr Asp Thr Val Gly Gln Asp Val Asn Ala
 260 265 270

Val Glu Ala Ser Ser Lys Ala Pro Leu Ile Gln Gly Ser Thr Ala Asp
 275 280 285

Asp Ala Asp Met Phe Ala Asn Gln Met Met Val Gly Arg Cys
 290 295 300